Consumer Reports

"FACTS YOU NEED BEFORE YOU BUY"

VOL. 8, NO. 6 *Published Monthly by Consumers Union* JUNE 194

TEA SUBSTITUTES
CARE OF LEATHER
TYPES OF CHEESE

TESTS ON RICE
INSULATION FOR YOUR HOME
PEANUT BUTTER

JARS FOR CANNING
DRESS SHIELDS
REDUCING SENSIBLY

THIS IS YOUR ANNUAL QUESTIONNAIRE

TO CU MEMBERS:

CU here poses some war-time co[illegible]hat its service may be better adapted to your needs. Annually we welcome t[illegible]ortunity to learn h[illegible]an improve the work CU is doing for its members.

[illegible] REPLY WILL BE CONFID[illegible]L

WAR-TIME PRICE CONTROL AN[illegible]TIONING

1. Do you approve CU's policy in supporting price control, grade labeling, and the rationing of all scarce goods?

Yes_____ No_____

2. Do you feel that the following are being adequately enforced in your community:

(a) Price control? Yes_____ No_____

(b) Rent control? Yes_____ No_____

3. Because of the e[illegible]ve coverage given to the subject of point rationing by the [illegible], radio, etc., CU has been devoting only limited space to [illegible]bject. Do you want more information on point rationin[illegible] CU publications?_____ Do you favor present handling[illegible]_____(Check one).

4. Do you approve[illegible]CU's policy in voicing the consumer interest of its mem[illegible]before government agencies?

Yes_____ N[illegible]

CU PUBLICATIONS

5. Do you feel that CU's publications have kept a satisfacto[illegible] balance of consumer material? Yes_____ No_____

6. If not, on which of the following sections of the REPOR[illegible] do you feel more stress should be placed?

Medical section_____ Technical Section_____

Health, in general_____ Product ratings_____

Nutrition_____ General buying advic[illegible]

Other (name)_____ Care and repair_____

News and Information_____ Other (name)_____

7. Which of the following features do you like in BREAD & BUTTER? (Check your favorites.)

Editorial_____ Brand Ratings_____

Food [illegible]_____ 12.[illegible]

[illegible]mbers of CU have suggested that we devote [illegible]able space to articles on care of babies and growing children, sewing, cooking, wood working, etc. Would you like increased attention to (check):

Children_____ Cooking_____

Sewing_____ Other (name)_____

9. Do you think the ratings in the REPORTS should indicate where the products rated can be purchased?

Yes_____ No_____

10. Would you like CU to rate motion pictures?

Yes_____ No_____

[illegible]. What improvements would you like to see in REPORTS, BUYING GUIDE or BREAD & BUTTER? (Use last page for more comments.)_____

CONSUMERS UNION is a non-profit organization chartered under the Membership Corporation Laws of New York State. Its purpose is to furnish unbiased, usable information to help families meet their buying problems, get their money's worth in their purchases, develop and maintain an understanding of the forces affecting their interests as consumers. Consumers Union has no connection with any commercial interest and accepts no advertising; income is derived from the fees of members, each of whom has the right to vote for candidates to the Board of Directors. More than 70 educators, social workers and scientists sponsor Consumers Union and a national advisory committee of consumer leaders contributes to the formulation of policy (names of the members of the committee will be furnished on request).

CONSUMER REPORTS each month gives comparative ratings of a variety of products based on tests and expert examinations, together with general buying guidance, information on medical and health questions, and news of happenings affecting the consumer's interest. The Reports is the manual of informed and efficient consumers the country over.

THE BUYING GUIDE (published as the December issue of the Reports) each year brings together information from all the preceding issues with new material and special buying advice. Pocket-size, 384 pages, with ratings of several thousand products, the Buying Guide is an invaluable shopping companion. Every member gets a copy of the Guide with his membership.

BREAD & BUTTER reports each week on new and predicted price and quality changes in consumer goods, interprets Washington legislation as it affects consumers, reports government regulations and actions on the consumer front, advises on food buying and preparation.

SUBSCRIPTION FEES are $4 a year, which includes subscription to the Reports and Buying Guide and Bread & Butter; $3.50 without Bread & Butter (for foreign and Canadian memberships add 50¢). Reduced subscription rates are available for groups of 10 or more (write for details). Library rates, for the Reports and Bread & Butter without the Buying Guide issue, are $3.50; for the Reports alone, $3.

Membership involves no obligation whatsoever on the part of the member beyond the payment of the subscription fee.

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What Do You Want?

The typewriters in CU's *Bread & Butter* office are so well-trained (the typists say) that when the end of an editorial or article approaches, the typewriters just automatically go on to spell out "write your Congressman." As a matter of fact, despite their frequency, those three words are used with considerable reluctance at CU. When the welfare of the people and the nation is threatened, when the tides of war on the home front demand heroic action, what bold stroke does CU counsel? "Write your Congressman!"

As a matter of fact, a great many CU editorial conferences have searched for new weapons with which to fight home front battles. Consumer organization? Of course, but one of the most important things consumer organizations do is to get their members to write their Congressmen.

It all boils down to this: if you want your point of view considered by those who represent you, there is absolutely no substitute for letting them know what your point of view is.

WRITE US HOW YOU FEEL

The purpose of this editorial is not, however, to get you to write another letter to your Congressman. It's to get you to write to us—to CU; to urge you, if you haven't already done so, to express your point of view about what CU is doing for you, by means of the 1943 membership questionnaire. If it's too late for you to send in the ballot, remember that there's no deadline on the questionnaire.

If you want something done that isn't being done, something tested that isn't being tested, the way to get what you want is to tell us about it. And, conversely, if you think we're wasting time, money and space in the *Reports* or in *Bread & Butter* on something that's of no real use to you or anyone else, it's up to you to tell us about it.

We want to direct your attention particularly to one section of this year's questionnaire; the blank space on page four under the heading "Remarks." When you come to this section, remember that CU isn't just a publication; it's a membership organization. As one of its members, it's not only your privilege but your duty to express your views about the organization's work, to the CU Board of Directors. And it is the Board's duty to consider your views. The heading "Remarks" is an invitation from the Board to you to go to town; to state your reactions, fully and emphatically without being held in check by the "yeses" and "noes" of the numbered questions.

ANSWER THE QUESTIONS

Don't, however, skip the questions. Every one has a purpose. Telling us the ages of your children, for example, will help us decide what to do about testing children's clothing. The answers to the questions on family income (remember there's no signature on the questionnaire) will help determine the price ranges to be covered when samples are purchased for test.

A final word: every questionnaire in which the questions are checked will be tabulated. And though CU can't send individual answers to your comments, every questionnaire with additional remarks will go to a committee of the Board for study when future policy is being determined. And many of the comments will be published in the *Reports* in the coming months.

Consumer Reports

"FACTS YOU NEED BEFORE YOU BUY"

"Because it was established for the very purpose of aiding families to buy wisely, to avoid waste and to maintain health and living standards, and because it is the largest technical organization providing such guidance, Consumers Union recognizes a special responsibility to the nation. In full awareness of that responsibility, we pledge ourselves to do everything in our power to help Americans as consumers make the greatest possible contribution to the national need."—FROM A RESOLUTION ADOPTED ON DECEMBER 10, 1941, BY THE DIRECTORS.

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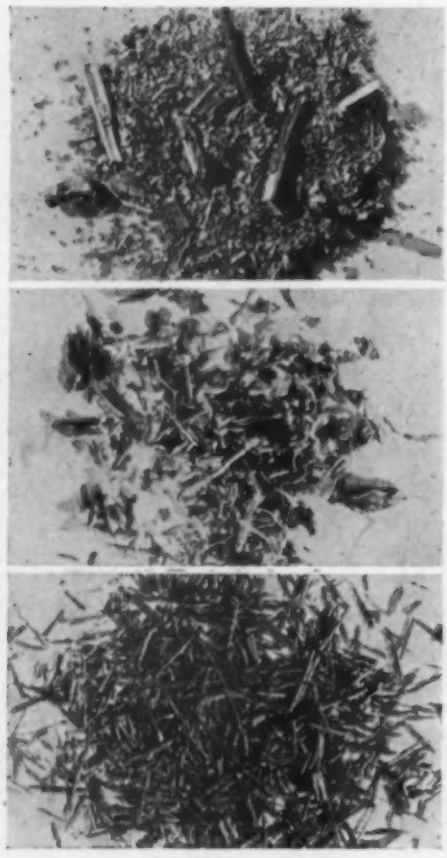
REPORTS ON PRODUCTS

SPECIAL CONSULTANT: Gerald Wendt: CHIEF TECHNICIAN: Sidney Wang

Ratings of products represent the best judgment of staff technicians or of consultants in university, governmental and private laboratories. Samples for test are in practically all cases obtained on the open market by CU's shoppers. Ratings are based on laboratory tests, carefully controlled use tests, the opinion of qualified authorities, the experience of a large number of persons, or on a combination of these factors. Even with rigorous tests, interpretation of findings is a matter on which expert opinion often differs. It is Consumers Union's pledge that opinions entering into its evaluations shall be as free from bias as it is possible to make them.

TEA SUBSTITUTES

. . . are made of many different things, from alfalfa to marigold petals. In CU's taste tests, six out of nineteen brands tested were considered "Good"; five "Fair"; eight "Poor"



MATÉ *(top) was the best-liked of the tea substitutes;* **ALFALFA** *(center) was considered one of the poor-tasting substitutes;* **ROOIBUSCH HERBS** *(bottom) brewed with cloves were used in "Kaffir Tea," which was rated second-best of all the tea substitutes tested.*

Although tea is still on the unrationed list, it is scarce or unavailable in many communities. Recent trade arrangements call for supplies amounting to half our normal tea consumption, to be brought into this country. This, coupled with the fact that many coffee drinkers are turning to tea as a hot drink to extend coffee rations, adds up to a tea shortage.

A variety of substances — maté, herbs, peppermint, alfalfa, peach leaves, marigold petals, parsley and clover among them—are being used alone, or in combination with real tea in an attempt to extend tea supplies. They are being sold under a variety of names and at a wide range of prices.

As with coffee substitutes (see the *Reports,* May 1943), CU carried on a series of taste tests on the tea substitutes, using a panel of eight tea drinkers as the jury. "Blind" samples —that is, samples unidentified as to brand—were given to members of the panel. With every sample, the taster was asked several questions: whether he liked or disliked the beverage, and how much; whether he liked it better than, as well as, or less than tea; and whether he would be willing to serve it as a beverage.

In general, the best liked drinks were the matés, which is unfortunate, since maté comes from South America, and presents the same shipping problem as does coffee. Like tea, maté contains caffeine, although its caffeine content is only about half that of tea. Maté is much used in South America, though in this country, too, it has had a limited distribution for many years.

PEPPERMINT *(top) is used alone or in combination with various herbs. Two of the peppermint teas rated "Fair," three, "Poor";* **DESERT HERBS** *(center) used in "California Desert Herb Tea," which was rated "Fair";* **RED CLOVER** *(bottom) was used for "Clovita Tea," considered "Poor."*

The best liked of the tea extenders was a half-and-half mixture of tea and maté. Second in the preference of the taste panel was a beverage made of herbs, steeped with cloves to make the brew.

Least satisfactory, in the eyes of the jury, were the peppermint, alfalfa, and miscellaneous leaf and herb teas. This may be because such brews are associated, in the minds of many people, with medicinal brews. One of the more interesting—but less pleasing—tea substitutes was made of dried parsley. Tasters concluded that when made according to instructions it lacked flavor; when made into a stronger brew, it tasted like soup.

In the first series of taste tests, all brands were brewed according to directions given on the package. In only one case could the resultant beverage be improved by altering the

strength. In the case of *Joyz Maté*, the use of a flat teaspoonful instead of the heaping teaspoonful called for in the instructions made considerable improvement in the flavor, according to the taste panel.

Nineteen brands of tea substitutes and tea extenders were included in CU's tests. Six were maté, one was a mixture of maté and tea, three were peppermint teas, one was a mixture of peppermint, peach leaves, marigold petals and herbs, two were mixtures of alfalfa and peppermint, three were made of herbs, and one each of parsley, alfalfa and clover.

The brands are rated "Good," "Fair," or "Poor," depending on the composite judgment of the taste panel. Tastes do differ, however, and yours may not agree with that of CU's tasters. If you're looking for a tea substitute, CU recommends that you try, first, those on the "Good" list.

Listed according to taste categories. The listing within each category is in order of decreasing taste score. The figure in parentheses is the cost of 10 servings. When the package was short weight, the cost per 10 servings was figured on the actual weight found.

GOOD

Teem (General Foods Corp.). 100 teabags, $1.10 (5.5¢). This is approximately 50% black tea and 50% maté. Nationally available.

Kaffir "Tea" (Battle Creek Food Co.). 4 oz., 55¢ (3.2¢). Herbs. Brewed with cloves. Nationally available.

Guayra Yerba Mate Especial (Joseph Victori & Co.). 1 lb. 1½ oz., 90¢ (3.1¢). Argentine maté. Short weight. Nationally available.

Tea Mor (Tea-Mor Co., NYC). 20 bags, 25¢ (7.8¢). Brazilian maté. Only 16 bags in the package. The label says 20.

Flor De Lis Mate (Joseph Victori & Co.). 2 lb. 3 oz., 75¢ (1.3¢). Argentine maté. Short weight. Nationally available.

Joyz Maté (International Maté Co., Cranbury, N. J.). 4 oz., 30¢ (3.4¢). Argentine maté. The tasters preferred this drink brewed with a level teaspoon per cup instead of a heaping teaspoon as directed. Cost of 10 servings is on the basis of the weaker brew.

FAIR

Arcadia Peppermint Tea (Sherman Foods). 3 oz., 50¢ (6.5¢). Peppermint. Available in the East in health and department stores.

Alfalfa-Mint Tea (Natural Brands, Inc.). 5 oz., 50¢ (1.9¢). Alfalfa and peppermint. Nationally available.

"California" Desert Herb Tea (Alvita Products Co., Pasadena, Calif.). 12 oz., 39¢ (2.5¢). Herbs. Nationally available in health and department stores.

Bragg Mint Tea (Live Food Products Co., Burbank, Calif.). 1 oz., 25¢ (7.1¢). Peppermint. Nationally available in health stores.

After Dinner Herb Tea (Hawthorne Distributors, NYC). 3½ oz., 90¢ (8.8¢). Herbs.

POOR

Alfamint (Pretorius Approved Products). 4 oz., 50¢ (2.9¢). Alfalfa and peppermint, oil of peppermint.

Parsley Tea (Alvita Products Co.). 1 oz., 25¢ (4.7¢). Parsley. This, when brewed according to directions, gave a weak drink. When the strength was increased, it tasted like soup.

Santay Peppermint Tea (Modern Products Inc.). 2½ oz., 75¢ (9.5¢). Peppermint.

Angela Maté (North American Maté Co.). 12 oz., 50¢ (2.1¢). Brazilian maté. Short weight.

Clovita Tea (Alvita Products Co.). 2 oz., 25¢ (2.6¢). Red clover. Short weight.

Live Mate Tea (Healthmode Products Co.). 4½ oz., 25¢ (3.1¢). Brazilian maté. This is a powdered product which is very difficult to strain.

Juniper Hills Tea (House of Herbs, Inc.). 4 oz., 75¢ (6.1¢). Peppermint, peach leaves, marigold petals, herbs. Comes in a glass jar or in a cardboard box. The sample was short weight, increasing cost per 10 servings to 9.6¢.

Alvita Tea (Alvita Products Co.). ½ oz., 10¢. (4.6¢). Alfalfa.

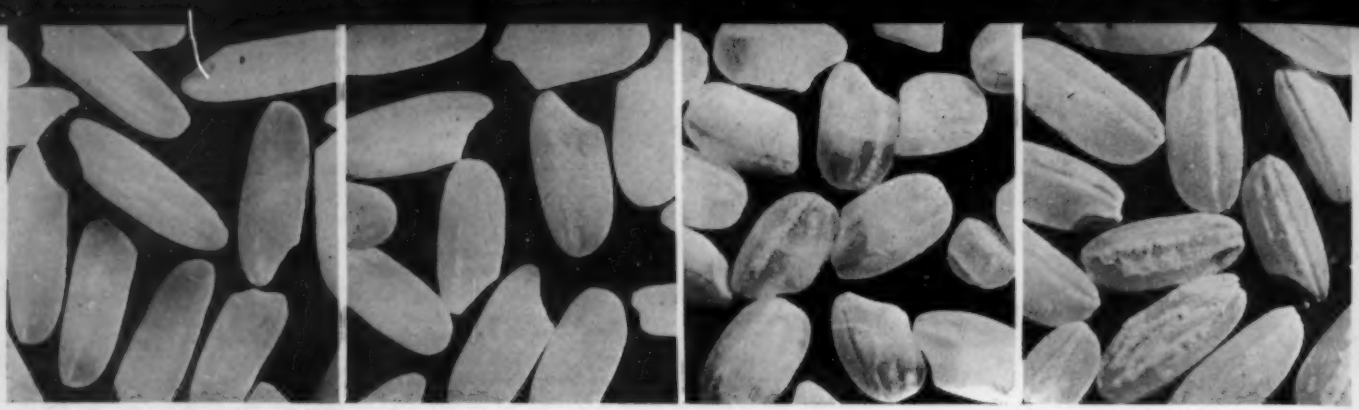
CU reports on tests of 19 widely available brands

Rice has been part of the American diet since the early seventeenth century, when it was first grown here. But it has never achieved the popularity that it has in the Orient, where rice is the staple food around which most main dishes are built.

But with potato shortages, and with the need to stretch meat rations through increased use of casserole dishes and by other means, rice is taking an increasingly important place in the American diet. And as housewives use it with increasing frequency, many are beginning to recognize something of which many were only vaguely aware in the past: that rice is not just rice; that there are variations which make the difference between an appetizing rice dish and a mediocre one.

CU's test of 19 widely available brands of rice was set up to show wherein this difference lies. Variety of the rice, color, and percentage of broken and of discolored grains were taken into consideration in rating the brands.

VARIETY. Three varieties are commonly used: Honduras, Blue Rose and Japanese. Other factors being equal, the Honduras variety is considered superior. The long and thin grains of this variety, however, are comparatively fragile, and tend to break when handled. But even with a comparatively high percentage of broken grains, Honduras rice of good quality is superior to very slightly broken rice of other varieties. Blue Rose rice is the kind most often



HONDURAS BLUE ROSE JAPANESE BROWN

found. The grains of this variety are shorter and broader than those of Honduras rice. Japanese variety rice is shorter and broader than either of the others, and is inferior to both.

COLOR. The best rice has an even, pearly color, but "white" rice can vary from white to gray. Besides, the color may not be even; the presence of chalky white spots (known as "whites") denotes inferior rice. Sometimes, too, brownish or black discolored spots are seen on some grains. This is evidence of careless processing.

BROKEN GRAINS. The manner in which rice is cooked, and the variety used, both affect the texture of the finished product—whether it tends to be fluffy or mushy. But to a large degree this is influenced, too, by the amount of broken rice in the raw material. For this reason, a minimum of broken grains in rice is desirable.

WHITE RICE VS. BROWN

Brown rice, besides being a high-calorie food, is rich in the B vitamins and in minerals. Unfortunately, practically all except starch is removed when the outer coating is taken off in making white rice. And it is this refined white rice which is most widely used.

There is no question but that brown rice is nutritionally superior. In fact, many people prefer the richer flavor of brown rice, once they have tried it. But if you do use white rice, don't depend on it for anything except starch; be sure to include all the other necessary nutritive elements in the rest of the menu.

RATINGS

The ratings which follow were based on careful examination of the 18 brands of white rice and one brand of brown rice which were found to be widely available. Taken into consideration were variety, color, absence of defects and amount of broken grains present.

WHITE RICE

BEST BUYS

The following brands were judged to offer the best value for the money in the order given. Figure in parentheses is the cost per pound.

National Brand (National Tea Co., Chicago). 10¢ for 1 lb. box (10¢). Blue Rose variety. Good quality. Pearly color. Very few broken and few discolored grains. Available in Illinois, Indiana, Michigan, Wisconsin and Iowa.

Sultana Extra Fancy (A&P). 8¢ for 12 oz. box (10.7¢). Blue Rose variety. Good quality. Pearly color. Few broken and discolored grains. Nationally available in A&P stores.

Ehler's Extra Fancy (Albert Ehlers, Inc., NYC). 12¢ for 1 lb. box (12¢). Honduras variety. Good quality. Fair color. Many broken grains, but rice of this variety breaks easily, and even with more broken grains, gives better appearance than whole grains of other varieties. No discolored grains. Available in the New York metropolitan area.

Kroger's (Kroger Grocery & Baking Co.). 12¢ for 1 lb. bag (12¢). Blue Rose variety. Good quality. Pearly color. Few broken or discolored grains. Nationally available in Kroger stores.

Sunnyfield Extra Fancy (A&P). 10¢ for 12 oz. box (13.3¢). Honduras variety. Good quality. Pearly color. Few broken or discolored grains. Nationally available in A&P stores.

Comet (Comet Rice Mills). 10¢ for 12 oz. box (13.3¢). Blue Rose variety. Good quality. Fair color. Very few broken and few discolored grains. Nationally available.

ACCEPTABLE

(In estimated order of quality)

Sunnyfield Extra Fancy (See "Best Buys".)

National Brand (See "Best Buys".)

Kroger's (See "Best Buys".)

Sultana Extra Fancy (See "Best Buys".)

Jewel Extra Fancy (Jewel Tea Co., Inc.). 31¢ for 1 lb., 10 oz. box (19.1¢). Blue Rose variety. Good quality. Pearly color. Very few broken or discolored grains. Available in Jewel stores and on Jewel Auto Routes.

Ehler's Grade A (Albert Ehlers Inc., NYC). 19¢ for 1 lb. box (19¢). Blue Rose variety. Good quality. Pearly color. Few broken or discolored grains. Available in the New York metropolitan area.

Ehler's Extra Fancy (See "Best Buys".)

Premier (F. H. Leggett & Co.). 17¢ for 1 lb. box (17¢). Honduras variety. Good quality. Pearly color. Many broken grains. Few discolored grains. Available east of the Mississippi.

Carolina Brand (Southern Rice Sales Co., Inc.). 19¢ for 1 lb. carton (19¢). Honduras variety. Good quality. Fair color. Many broken grains. Few discolored grains. Nationally available.

Roulston's Radio Brand (Roulston, Inc., Brooklyn, N.Y.). 12¢ for 12 oz. bag (16¢). Honduras variety. Good quality. Fair color. Considerable number of broken grains. Available in Long Island, Brooklyn and Staten Island in Roulston stores.

Comet (See "Best Buys".)

Red & White Extra Fancy (Red & White Corp.). 25¢ for 2 lb. box (12.5¢). Blue Rose variety. Fair quality. Fair color. Few broken and considerable number of discolored grains. Nationally available.

River Brand (Southern Rice Sales Co., Inc.). 8¢ for 12 oz. box (10.7¢). Honduras variety. Fair quality. Fair color. Excessive number of broken grains and considerable number of discolored ones. Nationally available.

NOT ACCEPTABLE

River Coated (Southern Rice Sales Co., Inc.). 11¢ for 1 lb. bag (11¢). Blue Rose variety. Low quality. Mixed color. Excessive number of broken grains and considerable number of discolored ones.

Prim Fancy (American Stores Co.). 6¢ for 12 oz. box (8¢). Blue Rose variety. Low quality. Fair color. Excessive number of broken and discolored grains.

Bohack Fancy (H. C. Bohack Co., Inc.). 11¢ for 1 lb. bag (11¢). Blue Rose variety. Low quality. Fair color. Excessive number of broken and discolored grains.

Bohack's (H. C. Bohack, Inc.). 20¢ for 2 lb. bag (10¢). Blue Rose variety. Low quality. Poor color. Excessive number of broken and discolored grains.

Safeway (Safeway Stores). 10¢ for 1 lb. bag (10¢). Japanese variety. Poor quality. Poor color. Considerable number of broken grains.

BROWN RICE

The following is the only brand of brown rice found by CU shoppers.

River Natural Brown (Southern Rice Sales Co., Inc.). 9¢ for 12 oz. carton (12¢). Blue Rose variety. Extremely variable, from very good to poor. Nationally available.

CHEESE

There are a great many types that most people have never tried. CU discusses some of the available varieties, and suggests some ways to use them

Little Miss Muffett, eating her curds and whey, was getting a dish of food that any nutritionist would approve. For the curd contains the base for cheese; and the whey, the remaining vitamins and minerals of whole milk. Had Miss Muffett removed and processed the curd to give it good keeping qualities, she could have charged ration points for her cheese.

All cheese begins as the curdled portion of milk. Making cheese from milk is a convenient way of preserving the valuable milk protein, along with a rich supply of vitamins and minerals. The more whey, or watery portion, that is drained away from the curd, the harder the cheese will be, and the better it can be preserved.

Hard cheeses are more concentrated foods than soft ones. But a pound of almost any cheese—hard or soft, rationed or unrationed—with the exception of cream cheese, contains more protein than a pound of good quality beef chuck. As for cream cheese, it is more valuable as a butter substitute than as a meat substitute; it has nearly half as much butter-fat as butter, and is nearly equal to butter in vitamin A content. All cheese except the kinds made from skimmed milk is, in fact, about as rich as butter in vitamin A, and Roquefort is an example of a cheese that is far richer.

Cheese is also a good source of the important minerals, phosphorus and calcium, the latter being one of the substances often deficient in the American diet. In their content of these two minerals the rationed types of cheese are much richer than most of the unrationed ones. But if you are thinking of cheese as a meat substitute, don't spurn the unrationed varieties for this reason, for meat is far lower in calcium content than any soft cheese.

TYPES AND KINDS OF CHEESE

From a common beginning a remarkable variety of cheeses has been produced—some mild, some sharp; some creamy, some crumbly. There are at least 18 distinct types of cheese, and over 400 different varieties are known.

Here are some of the more common rationed cheeses; descriptions are adapted from various government sources:

Brick, semi-hard, with a sharp flavor halfway between Cheddar and Limburger.

Cheddar or **American** which may be mild or sharp, cured or uncured. When cured it has a delicious nut-like flavor.

Edam, ball-shaped with a red rind. The flavor is similar to that of Cheddar, but somewhat sweeter and milder.

Gouda, flat disc-shaped cheese, a bit softer than Edam but similar in flavor.

Limburger, a semi-hard cheese whose rind has a strong carrion-like odor. The cheese itself has a pungent and delicious flavor.

Muenster, harder than Limburger with a milder flavor.

Parmesan, a very hard crumbly Italian cheese made from partially skimmed milk, much used as grated cheese in cooking.

Pineapple cheese, a very hard Cheddar, shaped like a pineapple.

Romano, a black-coated hard, dry cheese; salty and with a sharp, full flavor.

Smoked cheese, also very hard, usually sausage-shaped, with a smoky taste.

Stilton, hard, with a flavor derived from a characteristic green mold.

Swiss, fine-textured and creamy in color, with a mild, pleasing taste. Has large holes or eyes which should have a shiny surface.

Some of the unrationed cheeses include:

Blue or Bleu cheese, a semi-soft, crumbly cheese resembling Roquefort, delicately veined with blue-green mold, rich and tangy in flavor.

Brie, a soft cheese made much like Camembert, with a pronounced odor and a sharp, characteristic taste.

Camembert, creamy in consistency when ripe, with a rich flavor and aroma.

Cottage, a coarse-grained skimmed milk cheese, also with a fresh sour-milk taste. It is sometimes enriched with sour cream.

Cream, a smooth, rich cheese made of milk and cream, with a fresh sour-milk taste.

Gorgonzola, mold-ripened like Blue cheese; compact, creamy, and blue-veined. Flavor is delicately piquant.

Liederkranz, a soft dessert cheese, between Limburger and Camembert in flavor.

Neufchâtel, similar to cream cheese, but lower in fat and higher in moisture content.

Roquefort, delicately veined with greenish mold, and with a strong, rich flavor.

Sap Sago or green cheese, a very

SWISS CHEESE *is hard and smooth, with large holes or eyes. These should be smooth and shiny.*

COTTAGE CHEESE *is probably the most economical and versatile cheese you can buy. It is unrationed.*

hard Swiss skimmed-milk cheese containing dried leaves of a clover-like plant. It is excellent for grating and keeps well.

These widely diverse flavors and textures are slightly—but only slightly—influenced by the source of the milk, whether from a cow or goat or ewe. The original French Roquefort, for example, is made from ewe's milk, while Blue cheese, which tastes very much like it, is made from cow's milk by a similar process. By far the largest number of cheeses are made from whole cow's milk. If skimmed milk is used for cheeses made in this country, they must by Federal law be so labeled.

How the milk is curdled and what is done to the curd after it forms—these factors contribute most to the flavor of the cheese. Milk can be curdled by the action of organisms present in the milk itself and in the air around it, in the manner housewives make cottage cheese from soured skim milk. But in modern cheese-making a "starter" containing harmless bacteria is generally used for better controlled curdling. Rennet, an extract from the fourth stomach of the cow, is added to help set the curd of most cheese. It is not often used for cottage cheese and is frequently omitted in making cream and Neufchâtel cheeses.

The curd is developed and then separated from the whey by heating and stirring. Here is where the cheese begins to have its distinctive texture. Cottage cheese, for instance, is heated quickly and stirred infrequently. Cheddar and Swiss cheese, on the other hand, are heated gradually and stirred thoroughly to break the curd into small kernels.

PROCESSING THE CURD has much to do with the hardness, consistency and texture of cheese. The special feature of Cheddar cheese-making, for example, is the "cheddaring" or piling and repiling of the curd. This is part of a series of operations including heating, cutting, grinding and pressing the curd, that make cheddar a hard, smooth-textured cheese, low in moisture content.

RIPENING OF CHEESE. Special molds or bacteria give many cheeses their distinctive appearance and flavor. For instance, special eye-forming bacteria are innoculated into Swiss cheese while the *Pencillium roqueforti* mold produces the blue-green veining of both Roquefort and Blue cheese. Except for the sour-milk types—cottage, cream and Neufchâtel—which are uncured cheeses, almost all types of cheese develop their full flavor after a ripening period of some sort, varying from several weeks to several years.

In the ripening of soft cheeses like Brie and Camembert, the organisms are mostly on the surface and gradually penetrate through the cheese. Hence these types must be made in small sizes. They are packed and shipped before they are fully ripe, because once they reach full creamy ripeness (four to six weeks after they are made) they must be eaten at once.

The substances that ripen hard cheeses like Swiss, Edam, Gouda and Cheddar are distributed all through the cheese, and the ripening proceeds uniformly through the whole mass.

Cheddar cheese is sold both "green" and in various stages of ripeness. When green, it has a leathery texture and lacks the characteristic nut-like flavor of aged Cheddar. Aging may extend from two months to two years—the longer the ripening, the sharper and richer the flavor.

New Cheese Order

As we go to press, OPA announces that plans are under way to ration many types of cheese now on the unrationed list. For the time being, however, there are likely to be some unrationed varieties. And indications are that the cheeses which are to be newly rationed will have somewhat lower point values than the previously rationed cheeses. Many of them will, therefore, still be excellent values.

BLUE CHEESE *resembles roquefort; has a characteristic veining of blue-green mold.*

Pasteurized "process" cheese—the packaged types like *Velveeta* and *Pabstett*—is a manufactured product, made by melting together various ordinary cheeses, along with water and up to three percent of an emulsifying agent. The cheeses used as a base are seldom of high quality; usually cheeses having some defect so that they would not be saleable in their original form are employed. Once pasteurized, the flavor of process cheese remains unchanged because the aging process ceases.

People who really like cheese seldom like process cheeses, though their typically mild flavor and even consistency appeals to some.

CHEESE IN THE MENU

THE UNRATIONED CHEESES. Perhaps the most economical and versatile cheese you can buy is cottage cheese. (If you buy the creamed cottage cheese it will not be deficient in butter fat or in vitamin A.)

Cottage cheese can be used in salads or as a stuffing for celery. It can be combined with fruits or raw vegetables for sandwiches. Mixed with sour cream and berries, it is excellent for a Summer lunch or supper. It can be fried as cheese balls; baked with macaroni, it yields as tasty a dish as rationed grated cheeses can produce. Made into cheese cake or simply served with jam and crackers, it provides a tempting dessert.

Cream cheese is as versatile, though less economical, than cottage cheese. If your butter ration won't stretch, use cream cheese instead, and the butter will never be missed. The cost of cream cheese will probably be a few cents less per pound than butter, provided you buy bulk cheese or get it in packages no smaller than half-pound size. Cream

CAMEMBERT *is packed in small portions to allow the organism to penetrate and ripen the cheese.*

cheese can be used for many of the spreads and combinations recommended for cottage cheese. It can also be bought already combined with pimento, olives, relish, pineapple or any of a number of the sharper cheeses. But before buying these prepared spreads, consider whether it would be less expensive to make your own spread at home, for many of them are very simple to prepare.

Blue cheese is useful stuffed in celery as an appetizer; it is also excellent for flavoring salad dressing. Its most popular use is as a dessert cheese, served with crackers.

Sap Sago is an unrationed cheese that you may have trouble finding, for it is not widely distributed. But if you are able to locate some, your efforts will be rewarded. Sap Sago is not a moist or perishable cheese but a hard one, used almost exclusively for grating. It is sold in small truncated cones, can be grated at home and kept on hand for all kinds of cooking that call for grated cheese.

Camembert and **Liederkranz** are unrationed cheeses which fall in the luxury price class. Their chief use is as a supper or dessert cheese.

BUYING RATIONED CHEESE may be the choice of saving pennies instead of points. The majority of rationed cheeses are more economical in dollars and cents than most of the unrationed ones, in view of the concentrated food value of the harder cheeses. Parmesan cheese, for example, which is one of the higher-priced rationed cheeses, is also one of the most concentrated cheeses you can buy. A three-ounce package of grated Parmesan probably contains at least as much protein as a four-ounce package of grated Cheddar or five ounces of Blue or Roquefort cheese.

Probably the best known of the rationed cheeses is Cheddar or American cheese. Its uses are many; for Welsh rabbit and numerous other recipes, for melted cheese sandwiches, or served as-is on bread or crackers. A piece of Cheddar is not spoiled when it becomes too dry to serve with crackers; it may then be grated and used for cooking. It is not generally good economy to buy Cheddar cheese expressly for grating. Ready-grated Cheddar costs more per pound, but it is already dried and therefore contains more cheese and less moisture.

Grated cheese can help bolster up the protein content of a meal, and a little goes a long way. As a first course, use it in onion soup. For a main dish, make it into cheese soufflé, cheese croquettes, cheese rice or any number of vegetable-cheese or egg-and-cheese casseroles.

There are, of course, nearly as many other ways of using cheese as there are kinds of cheese. The assortment of cheese in any one store is apt to be quite limited these days, and it may require considerable shopping to find the less popular varieties. But new kinds of cheese and new cheese recipes can do much to enrich a meat-short and ration-harried diet.

HOW TO COOK CHEESE. Unless the proper technique is used, the protein of cheese becomes tough and leathery when it is cooked. Cheese should be melted over low heat, preferably in a double boiler. If it is not grated, it should be broken into small pieces so that it will be blended with other ingredients with which it may be cooked.

HOW TO STORE CHEESE. Hard, cured cheese can be stored at home for some time. Wrap it in damp cheesecloth and keep it in a cool place. A small piece may be kept in a covered dish in the least cold part of the refrigerator, with a small glass of salt water beside it in the dish.

Grated cheese need not be kept in the ice box but should be stored in a covered jar.

PEANUT BUTTER

. . . is a low-cost, nutritious, unrationed food. CU reports test results on 32 brands. Excessive defects — pieces of skin, discolored or scorched peanuts, etc. — were found in five brands

Peanut butter has been manufactured for about 50 years, but it is only in the past 10 or 15 years that people have come to consider it as a food rather than as a luxury snack. Back in the gay 90's a St. Louis physician started making it as a food for invalids. The Battle Creek Foundation and other sanatoriums began using it, individuals began very small scale manufacture and distribution and production grew slowly but steadily until peanut butter today is a staple on every grocer's shelf.

Rationing of foods—especially of the high fat and protein foods like meat, cheese and oils—and rising prices have intensified the need for low-cost highly nutritious foods. Peanut butter is such a food. It is unrationed. In addition to the energy-giving carbohydrates it contains, it is a rich source of the proteins necessary for good nutrition. The oil, which constitutes about half of the finished product, contains about 20% of linoleic acid—a fat essential to good nutrition. Peanut butter also contributes substantial amounts of the minerals (calcium, phosphorus and iron), and is a very important and inexpensive source of vitamins B_1 (thiamin), riboflavin and nicotinic acid. Although as much as 90% of the thiamin content of raw peanuts may be destroyed in the manufacture of peanut butter, significant amounts remain in the finished product.

WHAT IS PEANUT BUTTER?

According to the standards issued by the U. S. Dep't of Agriculture, peanut butter is defined as "the food product prepared . . . by grinding mature, roasted peanut kernels from which the majority of seed coats have been removed and is manufactured and packaged . . . to insure proper protection and freshness." The peanuts may be ground very fine to produce a fairly smooth butter; they may be ground a little coarser to produce a "grainy" butter; or they may be ground to contain "chunks"

or small pieces of unground peanut.

Most manufacturers buy shelled peanuts, and do their own roasting before grinding. Shelled peanuts come in three grades: No. 1, perfect, unbroken kernels; No. 2, split kernels; and No. 3, broken kernels, "hearts," pieces of skin, etc. No. 1 peanuts are generally used for making high-grade peanut butter, but good No. 2 peanuts are sometimes used. Good quality peanut butter starts with the grade of raw peanuts used and peanut butter made from No. 2 or No. 3 peanuts may have poor color, odor and flavor and may even be unfit to eat.

Not only the grade, but also the type used is important in determining the quality of the peanut butter. "Virginia" and "Spanish" peanuts are the varieties most widely used. "Virginia" peanuts contain only about 40% of oil and for that reason tend to yield butter too dry for most tastes. "Spanish" peanuts, on the other hand, contain about 50% oil, and make an oily butter. For this reason most manufacturers use combinations of the two, in various proportions.

MANUFACTURING PROCESS

The next step in the manufacture of peanut butter is roasting. Since raw peanuts are unpalatable, underroasting impairs flavor. Long roasting or roasting at too high temperatures, on the other hand, gives the butter a scorched flavor and a dark color, and increases the destruction of vitamin B_1.

After roasting, the peanuts are blanched to remove the skins, and split to remove the "heart." Any skin ground up with the peanuts gives the peanut butter a slightly bitter taste and a speckled appearance. Any considerable quantity of "hearts" also makes the butter taste bitter and tends to hasten rancidity. Although this work is done largely by machinery, some hand picking and screening are necessary to remove any remaining unblanched or discolored kernels, "hearts," and foreign material.

The peanuts are now ready for blending, grinding and packaging. It is here that clean, sanitary procedure is especially important. Salt is usually added and sometimes sugar as well. Containers are usually filled directly from the grinder, although sometimes a separate filling machine is used. Great care must be taken during these operations to keep dust and dirt from contaminating the butter.

Peanut butter will keep sweet and fresh for a long time if properly packaged, but the user should remember that putting a wet spoon or knife into it or leaving it open or loosely closed will tend to make it turn rancid.

OIL SEPARATION

Sometimes in opening a jar of peanut butter, a layer of oil is found on top of the solid material. Such separation may detract from the appearance of the peanut butter, but does not indicate that it is inferior in quality. The separated oil should be stirred back into the peanut butter before use. However, since eye-appeal is an important factor in selling a product, some manufacturers have tried to overcome this by "homogenization"; by removing the oil, hydrogenating it and putting it back into the peanut butter; or by addition of small amounts of glycerol. These methods produce a firm, smooth peanut butter.

HOW CU TESTED

CU technicians examined 32 different brands of peanut butter. Net contents as stated on the labels was checked and none of the brands was found to be short weight. Separation of oil was noted and after thorough mixing the samples were examined for color, odor and flavor. "Defects," such as pieces of skin, discolored or scorched peanuts, sand, etc. were determined according to methods given in the U. S. Standards for Grades of Peanut Butter. Excessive defects are an indication of carelessness in sorting or cleaning the peanuts, or of lack of sanitary precautions during the grinding and packing of the peanut butter.

You Can Make It

According to U. S. Bureau of Labor Statistics, the price of peanut butter has increased by about 50% in the past year. This may be due, in part, to the fact that peanut growers have been getting fancy prices on the 1942 crop.

Peanut butter can be made at home by grinding roasted peanuts in an ordinary meat grinder. Details of roasting, cleaning and grinding may be obtained by writing to the Sup't of Documents, Washington, D. C. for Circular No. 384 of the U. S. Dep't of Agriculture (price 5¢ in coin).

BEST BUYS

The following brands were judged to give the best values for the price, in the order given.

Heinz (H. J. Heinz Co.). 1-lb. jar, 35¢. Dark roast. Slightly salty flavor. Made with hydrogenated peanut oil. Nationally available.

Dellford (Middendorf & Rohrs, NYC). 1-lb. jar, 31¢. Light roast. Available in New York metropolitan area.

Monarch (Reid, Murdoch & Co.). 1-lb. jar, 39¢. Light roast. Nationally available.

Peter Pan (Derby Foods Inc.) 13-oz. jar, 29¢; cost per lb., 36¢. Light roast. Slightly salty flavor. Glycerol derivative of peanut oil added. Nationally available.

Come Again (National Tea Co.). 2-lb. jar, 45¢; cost per lb., 22½¢. Light roast. Slightly salty flavor. Available in the Middle West.

ACCEPTABLE

(Listed in estimated order of quality)

Heinz (see under "Best Buys").

Skippy Chunk Style (Rosefield Packing Co., Ltd.). 1-lb. jar, 59¢. Very light roast. "Oil modified by hydrogenation." Nationally available.

Monarch (see under "Best Buys").

Dellford (see under "Best Buys").

Peter Pan (see under "Best Buys").

White Rose Vitaminized (Seeman Bros., Inc.). 10-oz. jar, 23¢; cost per lb., 37¢. Dark roast. "Vitamin D added in ratio 1.5 U.S.P. units per gram of peanut butter." Nationally available.

Come Again (see under "Best Buys").

Kroger's Country Club, Peanut Butter Crush (Kroger Grocery and Baking Co.). 1-lb. jar, 30¢. Light roast. Available in Middle West.

Hood's (H. P. Hood and Son, Boston). 8-oz. jar, 16¢; cost per lb. 32¢. Light roast. Available in Hood's Creamery stores in the greater Boston area.

Kroger's Embassy (Kroger Grocery and Baking Co.). 1-lb. jar, 29¢. Light roast. Available in Middle West.

Finast (First National Stores, Inc.) 2-lb. jar, 49¢; cost per lb., 24½¢. Dark roast. Available in New England and a few other areas.

Armour's Star (Armour & Co.). 1-lb. jar, 31¢. Light roast. Nationally available.

Beardsley's (J. W. Beardsley's Sons.). 1-lb. jar, 39¢. Dark roast. Available in metropolitan New York and New England.

Skippy Cream (Rosefield Packing Co., Ltd.). 1-lb. jar, 59¢. Very light roast.

"Oil modified by hydrogenation." Nationally available.

Jack Sprat (Jack Sprat Foods, Inc.). 1-lb. jar, 29¢. Very dark roast. Slightly salty and scorched flavor. Available in Central States.

Frank's Jumbo (The Frank Tea & Spice Co.). 10½-oz. jar, 25¢; cost per lb., 38¢. Light roast. Nationally available.

Beech-Nut (Beech-Nut Packing Co.). 8-oz. jar, 23¢; cost per lb., 46¢. Dark roast. Nationally available.

Bohack's (H. C. Bohack Co., Inc., Brooklyn, N. Y.). 1-lb. jar, 24¢. Very dark roast. Available in Brooklyn and Long Island only in Bohack stores.

Sultana (A & P Tea Co.). 1-lb. jar, 25¢. Dark roast. Slightly scorched flavor. Nationally available.

Slade's (D. & L. Slade Co.). 1-lb. jar., 39¢. Very dark roast. Fair flavor. Available in New England.

Gerbro (Gerber Bros., Brooklyn, N. Y.). 6-oz. jar, 15¢; cost per lb., 40¢. Light roast. Available in the New York metropolitan area.

Peanut Crunch (Holsum Products). 1-lb. jar, 35¢. Dark roast. Nationally available.

Premier (Francis H. Leggett & Co.). 1-lb. jar, 39¢. Light roast. Available East of the Mississippi.

Ann Page (A & P Tea Co.). 1-lb. jar, 27¢. Very dark roast. Scorched odor and flavor. Nationally available.

Asco (American Stores Co., Philadelphia). 1-lb. jar, 27¢. Light roast. Poor odor, fair flavor. Available in stores connected with American Stores Co.

Krasdale (Krasdale Foods, Inc., NYC). 6-oz. jar, 15¢; cost per lb., 40¢. Very dark roast. Scorched odor and flavor. Available in the New York Metropolitan area.

SUBSTANDARD

The following are rated "Substandard" because of excessive defects such as pieces of skin, discolored or scorched peanuts, sand, etc.

Co-op (National Co-operatives, Inc.). 8-oz. jar, 16¢; cost per lb., 32¢. 1-lb. jar, 27¢. Not uniform with regard to roast or defects. One jar contained excessive defects. The other jar was "Acceptable."

Diamond (Old Reliable Peanut Co.). 1-lb. jar, 26¢. Dark roast.

Jane Goode (Swift & Co.). 1-lb. jar, 35¢. Dark roast.

Royal Scarlet (R. C. Williams & Co., Inc.). 1-lb., 8 oz. jar, 35¢; cost per lb., 23¢. Dark roast. Poor odor and flavor.

Savoy (Seeman Bros. Inc.). 1-lb. jar, 25¢. Dark roast.

Sweet Life (Sweet Life Food Corp.). 1-lb. jar, 29¢. Dark roast. Poor odor and flavor.

AMMONIA SUBSTITUTES

. . . prove to be ordinary household cleansers in bottles. CU tells you how to make low-cost substitutes, and discusses types now on the market

Household ammonia is a war casualty. The need for nitrates in the manufacture of explosives leaves none for civilian use.

The loss is not serious, however, as there are many cleaners which can do as good a job as ammonia does, and at a much lower cost. Trisodium phosphate, tetrasodium pyrophosphate, sodium metaphosphate, washing soda, and the various synthetic detergents make good cleaners. Their only drawback is that unlike ammonia they all leave a film after drying if they are left to dry on the object to which they are applied. But this film can be prevented by wiping the object dry.

That these powdered cleaners are satisfactory has been proved over a period of years by the successful use of *Oakite* (trisodium phosphate), *Calgon* (sodium metaphosphate) and other similar substances.

But as ammonia disappeared from the market the same chemicals, dissolved in water, began to appear under a new guise—ammonia substitutes. These were nothing but dilute solutions of the powdered cleaners, selling at prices comparable to that of household ammonia. To add to the illusion that these cleaners were ammonia-like, many manufacturers added small amounts of ammonia to give an ammonia odor. Others added pine oil or some other odorous substances to give the illusion of a new type of cleanser. The actual cleaning ability of these substances comes, however, from the powdered cleaners mentioned above.

Five of these cleaners, selected at random, were purchased and tested. One contained about 2% of tetrasodium pyrophosphate. Another contained about 4% of washing soda, and the other three contained about 1½% of solid trisodium phosphate. Tetrasodium pyrophosphate can be purchased at Co-op stores for 29¢ for 44 ounces or two-thirds of a cent an ounce. Trisodium phosphate can be purchased at the same place or at a paint store for 13¢ for 24 ounces or a bit more than half a cent an ounce, and washing soda sells in grocery stores for about 7¢ for two pounds, or about two-tenths of a cent an ounce.

When you compare these prices with the cost of the new cleaners mentioned below, it becomes obvious that buying the powdered cleaners and adding your own water is much cheaper. The five cleaners listed are simply typical; they are not meant to cover the field.

Sparkling Nu-Monia (Bri-Test Products Corp., NYC). 15¢ for 1 qt. of solution containing approximately 4% washing soda. Cost of ingredients, ¼¢.

Beacon Zero (Beacon Chemical Corporation, Philadelphia). 17¢ for 1 qt. of solution containing approximately 2% of tetrasodium pyrophosphate. Cost of ingredients 4/9¢.

C. C. Parsons' Cleanser (Parsons Ammonia Company, Inc., NYC). 9¢ for 10 oz. solution containing approximately 1.5% trisodium phosphate. Cost of ingredients, 1/10¢.

Carmex Ammonia Substitute (Carmel Oil Co., Inc., NYC). 12¢ for 1 qt. of solution containing approximately 1.5% trisodium phosphate. Cost of ingredients, ¼¢.

General Ammonia Substitute (General Products Co., Brooklyn, NYC). 12¢ for 1 qt. of solution containing approximately 1.5% trisodium phosphate. Cost of ingredients, ¼¢.

Make Your Own Cleanser

You can save a substantial part of your cleaning budget by making your own ammonia substitute from the dry powder. Here is a rough guide as to the amounts of the different powders that you need (figure in parentheses gives approximate cost per quart of each type):

Washing Soda: two slightly rounded tablespoonfuls to a quart of water (3/10¢).

Trisodium Phosphate: four flat teaspoonfuls to a quart of water (¼¢).

Tetrasodium Pyrophosphate: four flat teaspoonfuls to a quart of water (½¢).

CARE & REPAIR: LEATHER

Like most other products, leather will look better and last longer if it is kept clean. Cleaning most leather isn't difficult; usually it can be done at home without special fancy cleaners. There are, however, novelties made completely or in part of leather which require professional cleaning.

Except for suedes and novelties, most smooth leathers are washable. Leather goods which are washable can be cleaned with soap and water; those which are not washable can be cleaned with spot removers or other dry cleaning solutions. To be on the safe side, try washing or dry cleaning of any article for which cleaning directions are not given, on some part that doesn't show.

To wash leather, first brush it lightly with a stiff brush well soaped with warm, not hot water. After brushing well, wash off the soap solution with a cloth dipped in warm clear water. Dry with a clean soft cloth to remove all excess water and place the leather object in a cool spot away from direct sunlight to dry. Before the leather is completely dry rub it with castor oil if the leather is to be polished to a high shine, or with neat's foot oil if it is not to be polished. Remove excess oil and allow to dry.

NON-WASHABLE LEATHERS

If the leather is not washable, clean it with a soft brush and dry cleaning solution. The dry cleaning solutions are simple organic solvents or mixtures of such solvents. Brush from the center out toward the edges, covering every part of the leather. As the leather becomes cleaner use lighter and lighter strokes to avoid rings and markings. When using dry cleaning solutions, work in a draft of fresh air as the fumes are poisonous. Avoid inflammable cleaners.

Suede leather should not be washed. Clean suedes with a soft bristle brush, using a circular motion. Do not use wire bristles. After cleaning, smooth the nap in one direction. Avoid powder cleaners, and when necessary use special suede cleaning solutions which contain small amounts of aniline dye of the same color as the suede.

When cleaning leather objects like belts which are worn next to clothing, clean both the face and the back.

There are special cleaners like saddle soap for washable leathers, and special dry cleaning solutions for non-washable leathers. Most of the saddle soaps are similar in basic formula, and do very little that ordinary soap and water plus an oil treatment, as described above, won't do.

STAIN REMOVAL

The general cleaning methods do not remove special stains such as mildew, lipstick, lacquer, paint, deeply imbedded grease, colored shoe polish, and old perspiration stains. These stains, like those in ordinary textile fabrics, must be removed by special methods. With leather, however, the methods are difficult and may damage the leather or affect its color. For valuable pieces, therefore, it is advisable to have the work done by a professional cleaner experienced in handling leather.

If you try any of the following methods, keep in mind the risk of damaging the leather.

LACQUER AND NAIL POLISH. Because lacquer is pyroxylin in a special solvent, and because any color is pigment, it is a simple matter to remove lacquer stains by sponging with a pyroxylin solvent such as ethyl acetate or acetone (available in paint stores).

LIPSTICK AND ROUGE. The coloring matter in lipsticks and rouges is either iron oxide or a dye. For removing such stains, it is advisable to use organic solvents rather than water, since water may cause the color to spread and penetrate more deeply into the leather. Rub the stain with a naphtha soap to remove the coloring matter, and then sponge out the soap and coloring matter with a non-inflammable spot remover. Since there is some danger that the color of the leather will be removed in the process, try the solvent first on a spot that doesn't show.

MILDEW AND MOLD. If fresh, mildew and mold can often be removed with a fairly stiff brush. If the stain is old and has penetrated the leather, it will be necessary to clean with soap and water and a stiff brush. There is a possibility that after the mildew stain is removed, dark spots will remain. These can be bleached out with ordinary peroxide and then sponged with water. Color removed in the bleaching will have to be restored.

PAINTS AND VARNISHES. Fresh paint stains can be removed with simple paint removers such as turpentine. Old paint stains require rubbing with a stiff brush, followed by the use of a liquid paint remover. Use extreme care, if an inflammable paint remover has to be used to dissolve the paint. After the stain is removed, sponge the treated area with fresh paint remover or carbon tetrachloride, working from the center out to prevent the formation of rings.

MUD is easily removed by first brushing dry, then washing with soap and water. If the mud has darkened the leather use hydrogen peroxide as a bleach. As with mildew, if original color is removed from the leather it will require restoration.

PERSPIRATION causes persistent staining which requires considerable washing and rinsing. Use a solution made up of 1 tablespoon salt, ½ pint of vinegar and ½ pint of water. Sponge the stain freely and wash with clear water. If the stain persists, use 1 teaspoon salt, 1 ounce of vinegar, 4 ounces of denatured alcohol, and 5 ounces of acetone. Sponge the stain with this solution until it is gone, and then rinse with clear water.

UNKNOWN STAINS. If the source of the stain is unknown *proceed with caution*. First sponge with a dry cleaner and allow to dry. If the stain becomes lighter, continue the treatment. If it is not affected, try soap and water, and rub with a stiff brush, then sponge with water. Try removing any remaining stain with a bleach, such as peroxide, bearing in mind that some of the original color may be lost.

In stain removal, always remember that it is not advisable to use soap and water on leather which is not washable. Such use over a large surface is dangerous, although small stains may be removed without harming the leather. If the stain is large, or if its removal may remove the original color of the leather, it is advisable to let a professional do the job. He has a better chance of doing a good job, and if the color or finish needs restoration, he can do it.

HOME INSULATION

Plan to insulate your house now to save fuel next Winter. CU discusses types of insulation and tells how to install them

"Wherever you live—whatever you use to heat your home— . . . you must save fuel to increase America's fighting power. . . . Fuel is a weapon of war. . . ."

There are two aspects to the problem of fuel conservation in heating homes: first, producing the heat in the most efficient possible way; and second, making use of as much as possible of the heat produced. It is with the second aspect—the problem of proper insulation—that we shall deal in this article.[1]

To solve the problems involved in insulation, it is necessary first to understand something of the principles of heat transfer. The primary principle is simple, though it is glorified with an elaborate name: "Second Law of Thermodynamics." It is simply that heat always flows from a point of higher temperature to a point of lower temperature. That means, of course, that heat tends to flow *out* of a heated house in cold weather, *into* a cool house in Summer sunshine.

The problem of insulation is to cut this heat flow to a minimum. In the following paragraphs we shall speak in terms of heat loss from the house to the outside as a means of saving fuel; actually, everything that is said has a reverse application. That is, proper insulation cuts down heat loss in Winter, and heat gains in Summer.

A number of studies have been made to find out just where heat leaks out of a house. One study[2], covering 200 wood-frame construction, uninsulated homes, with no weatherstripping, concludes that of the total heat lost, the distribution is as follows:

16.2% through the roof
27% through the walls
25.8% through glass
24.6% through cracks, etc.
4.3% through doors
2.1% by other means.

Other studies show similar losses.

The job of insulation is to plug these gaps. This is done in various ways, to take care of different kinds of heat loss. Heat is transferred—and lost—in three ways:

CONDUCTION refers to heat flow through a solid. You can observe it easily by dipping a cold metal spoon into a cup of hot water; the handle quickly gets hot. And you can see that different substances differ in their ability to conduct heat—and to insulate—if at the same time you put the metal spoon into the hot coffee, you put a glass rod beside it. In a few seconds, the metal will have become hot; the glass will remain cool.

The ability to conduct heat varies widely with different substances; metals are the best conductors; nonmetallic solids conduct heat less easily; gases are lowest in ability to conduct heat. If conduction were the only method of heat transfer, therefore, gaseous substances (like air) would be the only insulators needed.

CONVECTION is the second type of heat loss. It occurs only in gases and liquids through motion of the medium itself. It is best seen in "drafts" of cold air through an open window, and in the way hot air rises.

RADIATION, the third type of heat transfer, is the means through which the earth receives its heat from the sun or, on a smaller scale, the way a room is heated by a radiator or an electric heater. Conversely, it is one of the ways heat is lost through the walls of a house, with the house itself, in effect, a huge radiator, losing heat to the outside atmosphere. Radiation is readily transmitted through air; it cannot go through solids easily.

Actually, most heat losses combine all three types.

INSULATING MATERIALS

We have seen that air is an excellent medium for insulating from conduction, but not from convection or radiation; on the other hand, nonmetallic solids protect against heat loss through convection and radiation, and are fairly good insulators against heat loss from conduction. A good house insulator makes use of both these factors; it is made up of a non-metallic solid (rock wool, glass wool, etc.) containing many tiny air spaces. In this way, convection and radiation losses are kept at a minimum, while taking advantage of the low conducting ability of air.

In general, two types of insulating

[1] See the following back issues of the *Reports* for material on fuel saving through efficient heat production: February 1943; August 1942; August 1941.

[2] Babbit and Hyland, "House Insulation and Its Relation to Canada's War Effort." Document NRC 1055, National Research Council of Canada, 1942.

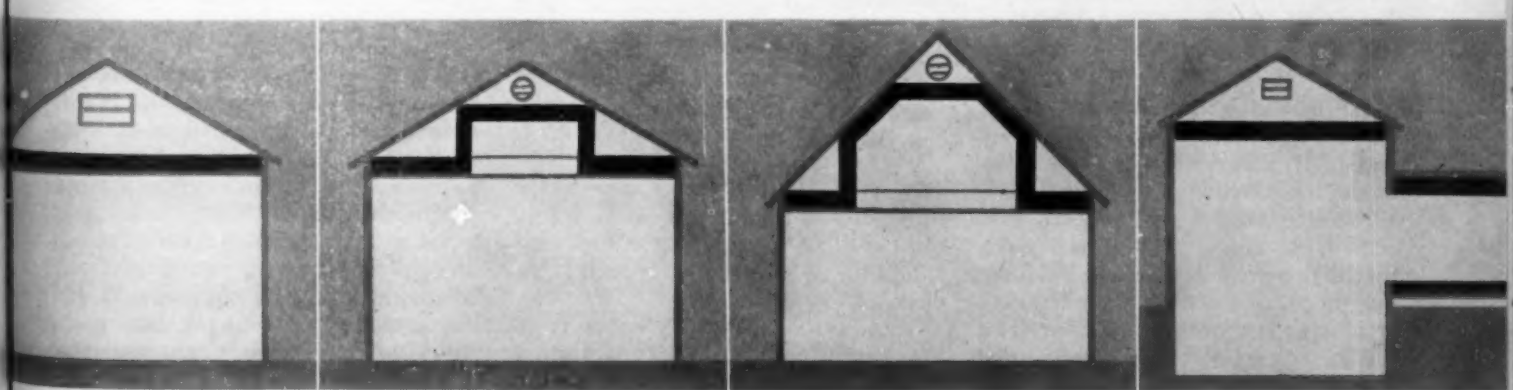


FIG. 1: *An unfinished attic is easiest to insulate. Blanket, batt or loose-fill material are applied in the attic floor.*

FIG. 2: *A finished attic room complicates the problem. The rule is to insulate around all the usable space.*

FIG. 3: *Somewhat more complicated, the same "cap-off" principle can be applied to this as to the house in figure 2.*

FIG. 4: *Enclosed porches having no basements need insulation on floors as well as on walls and ceilings.*

materials are available for residential use: (1) fibrous or cellular substances, either in loose form (asbestos fibers, rock wool, glass wool) or fabricated into soft, flexible quilts between layers of paper or textile; and (2) rigid boards (beaverboard, asbestos board), in which similar insulating materials are bonded together in some way.

Within each type, there appear to be only small differences in insulating ability. But in general it can be said that the lighter and more porous the material, the better its insulating ability for the thickness used. Rigid boards are, in general, poorer insulators than the loosely packed, flexible substances. But with them, too, the lighter, less compressed boards are better insulators than heavier, highly compressed ones. Heavy wall boards containing plaster are relatively low in insulating value; they are, of course, valuable building materials, and they do cut down heat losses by reducing infiltration of air through porous walls.

HOW TO INSULATE

Even within the limitations set by wartime conditions, it is possible to do a great deal to cut down heat losses in an existing house. How much you can cut them depends, in part, on how much heat loss there is to start with. The typical heat losses, referred to above, may not apply to your house. For example, in a rambling bungalow, chances are that much more than the 16.2% noted would be lost through the roof; if your house has a great many windows, heat loss through them would probably be much greater than the 25.8% mentioned.

Here we shall discuss the various available methods of cutting down heat losses in the average home; if yours has special features, some of these methods may not apply.

STORM DOORS AND WINDOWS. Heat loss through doors is comparatively small, but it is so simple and inexpensive to cut down that the job is well worth doing. Two types of storm doors are available: those that fasten into the door frame, forming a double door, and those which form a small corridor or box outside the door. The corridor type is more satisfactory since it eliminates the discomfort of drafts from outside when the inner door is opened. Besides, the corridor forms a convenient place for wet rubbers and overshoes.

In any case, whether you install storm doors yourself or have them installed by an expert, make sure that you have a reasonably tight fit, so that convection losses are kept to a minimum.

Storm windows offer one of the most efficient ways of cutting heat losses in the average house. A striking illustration of their value is shown in tests conducted in the University of Illinois, where application of tightly fitting storm windows to the Research Residence cut fuel consumption 20% without reducing indoor temperatures.

In addition to cutting losses from heat conduction and radiation, tightly fitting storm windows can also cut convection losses and eliminate the need for weatherstripping.

If it is not possible to put storm sashes on all the windows, at least they should be applied to those on the side of the prevailing Winter winds —generally the North and East sides of the house. Weatherstripping should be applied to the other windows.

WEATHERSTRIPPING AND CAULKING. If the house is relatively free of cracks at windows and door frames, weatherstripping alone will make a great improvement. Various types of stripping are available; most common are wood and felt, felt and metal. The job of applying felt, or wood and felt weatherstripping is not difficult, and the average home owner can probably do it himself at a comparatively low cost (see the *Reports*, October 1942). The application of metal weatherstripping is somewhat more complicated. The latter is also rather costly, and some types have to be applied by a skilled weatherstripping

Thickness of Insulation

It is obvious that the thicker the insulating sheet, the more heat it will tend to keep in the house. But under actual conditions, a sheet of insulation two inches thick will not save twice as much fuel as a sheet of similar material one inch in thickness. In other words, there is a point at which adding more insulation drives up the original cost without reducing fuel bills proportionately.

Frequently, the thickness of the insulation to be used is determined by calculation based on theoretical laboratory values rather than actual conditions. But an experiment conducted for the Wood Conversion Co., manufacturers of *Balsam Wool*, sheds some light on what actually happens.

Four one-and-a-half story test houses, identical in construction and exposure, were set up in St. Paul, Minn. They differed only in the insulation used. House I, the control, was uninsulated. The other three houses had different thicknesses of treated wood fiber insulation between asphalt sheets. House II had insulation nine-tenths of an inch thick; House III, one and seven-tenths inches; House IV, two and three-tenths inches.

All four houses were heated with oil burners, and kept at the same temperature throughout the Winter. In the course of time, the following facts were found:

House II (0.9 inch) saved 294.7 gallons of oil over House I (no insulation);

House III (1.7 inches) saved 43.9 gallons of oil over House II;

House IV (2.3 inches) saved 9.2 gallons over House III.

In other words, the first nine-tenths of an inch of insulation saved something over six and a half times as much oil as the second eight-tenths of an inch of House III; the last six-tenths of an inch in House IV saved only about one-fifth as much as the added insulation on House III, and only one-thirtieth as much as the original nine-tenths of an inch of insulation on House II.

The lesson this teaches is that beyond the first inch or so of insulation, there is a point of rapidly diminishing returns, and in most cases, thicker insulation does not bring worthwhile savings, when the insulation is applied in the form of batting or as a blanket.

This is not necessarily true if loose fill insulation is used. Because of the relative crudeness of this material, and the practical difficulty of applying it in an even one-inch layer, a two-inch thickness is advisable under most conditions.

mechanic. To offset this high cost is the fact that metal weatherstripping, well applied, will fit more snugly than the other types, and will last for a longer time.

A very temporary and makeshift job of weatherstripping can be done in a few minutes, by sealing cracks around a window with gummed tape or cellulose tape. This should be used, however, only as a temporary "stop-gap."

In old houses, where cold air leaks through cracks around windows and door frames, or through cracks in the outer walls, caulking may be necessary. This is most often true in brick and masonry constructions, which develop structural cracks more readily than the more flexible wooden walls.

Caulking consists simply of filling in the cracks with some plastic substance which hardens on standing. If you plan to do it yourself, you can rent the necessary caulking gun from a hardware or paint store.

Some people worry about whether they will get enough air for ventilation if the house is made weathertight. Such worries are without foundation. Even with the best weatherstripping, there are enough air leaks in the average house to provide the necessary ventilation. And the notion that people have to sleep in howling gales of "fresh" air to be healthy, has long ago been discarded by authorities. If you are a fresh air fiend during sleeping hours, however, the best procedure is to weatherstrip the door of your bedroom; then keep the door closed while the window is open.

In the kitchen, it is possible that weatherstripping will interfere with the exhausting of cooking odors, etc. The most efficient solution, from the standpoint of minimizing heat loss, is to install a small motor-driven exhaust fan in the kitchen wall or window. Then the air can be cleared rapidly and efficiently, with minimum loss of heat, after which the fan can be turned off.

Proper application of weatherstripping, caulking and storm windows and doors can save up to 25% fuel in the average house. Up to 25% more can be saved by more drastic measures, including roof and wall insulation.

ROOF AND WALL INSULATION

Roof and wall insulation are relatively costly. But the fuel they can save is usually enough so that the cost of insulation is made up in fuel savings over a few years. There is a further factor which is hard to estimate in concrete terms—comfort. Walls in insulated houses are warmer than those in unprotected ones, even though general room temperature may be the same in both. Cold walls absorb heat from the body through radiation, and a room with cold walls feels colder than the thermometer shows it to be. With insulated walls, it is possible to maintain lower room temperatures without discomfort.

LOOSE-FILL INSULATION *(top) is poured into the pan-like space between the beams, over a vapor barrier;* **BLANKET-TYPE INSULATION** *(center) comes in rolls; usually the vapor barrier is attached to one side;* **BOARD INSULATION** *(bottom) can be used to finish a room as well as to cut heat loss.*

How and what kind of attic insulation is to be applied depends upon the condition of the attic space.

The simplest situation is in an unused and unfinished attic. Here the ceiling beams of the floor below are usually open, with some sort of catwalk arrangement across them. Insulation is fairly easy to apply with such an arrangement (see figure 1) and the home owner should have no trouble in doing it himself. (But don't step off the cat-walks or the beams; if you do, you may not only damage the ceiling of the room below, but you may break a leg as well.)

If you plan to use loose fill insulation, the first step should be to set up a "vapor barrier." This is important, for moisture as well as heat passes through from the floor below, and both must be kept out of the attic. The most practical material for a vapor barrier is a layer of asphalt-treated paper, laid over the ceiling beneath. Asphalt paper suited to the purpose is sold in rolls. In applying the paper keep in mind that the object is to provide an unbroken barrier over the ceiling. If you have to do any cutting and patching, remember to leave plenty of overlap, securely tacked down.

LOOSE FILL-TYPE insulation is poured into the panlike spaces between the beams, over the asphalt paper. All you have to do is pour out the material from the bags in which it is packed, and cover the attic floor, over the vapor barrier, to a uniform depth. (More detailed instructions are given on the containers.) In applying insulation of this type, be sure to block off all openings from the wall studs to keep air in spaces between wall studs from escaping up to the attic.

BLANKET-TYPE insulation, in which the insulating material is sandwiched between two layers of treated paper, can be used instead of the loose fill type. It is sold in various widths, to fit different spaces between the beams, and in one-inch to four-inch thicknesses. With this type of insulation, a separate vapor barrier is not usually necessary. Usually the insulation is already covered on one side with vapor-resistant material. Be sure that this vapor-proofed side is laid next to the ceiling laths. Read the instructions carefully before applying, and follow them closely, to make sure that you get tight connections against the beams and at the eaves.

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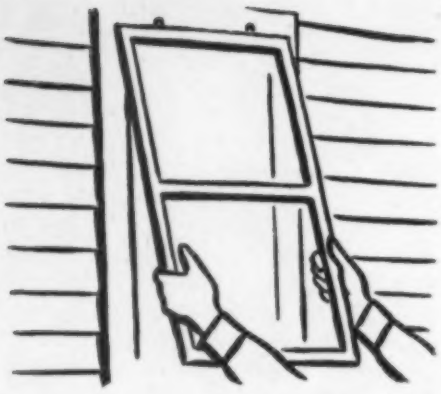


STORM WINDOWS *are one of the most effective ways to cut heat losses.*

BATT-TYPE insulation is a variation of the blanket type. It differs from the latter only in that it is cut into smaller sections. On some types of ceiling construction, it is easier to apply.

When the attic space is "finished," and the rooms in the attic are used and heated, the problem of roof insulation is somewhat more involved. The general plan for insulation should be along lines similar to that in figure 2. In general this "cap-off" method will be found more practical than insulation of the entire roof slope, for the cap-off allows for air pockets which, if ventilated, help control condensation, and contribute to Summer comfort as well as Winter fuel-saving.

Although insulating a finished attic is no more difficult from the heat-saving point of view than doing an unfinished one, there is the additional problem of maintaining good appearance in the finished room. It may, therefore, be a good idea to have such insulation done by a professional.

The type of insulating material to be used will depend on several factors. If you are just finishing off the attic, batt- or blanket-type insulation can be tacked between the studs and rafters, following the methods discussed for insulating unfinished attics. When this is done, the interior finish of plaster or of composition boards can be applied directly to the studs or rafters.

An alternative is to use composition boards made of insulating material like *Celotex* or *Insulite* for finishing. If this is done, the thickness of the batting behind them can be considerably reduced.

A third method is to dispense with batting and blanket insulation entirely, using a double thickness of insulating board for the wall. These boards may be left unfinished, or they may be papered or painted. If they are to be finished, a good plan is to use a treated wall paper or a special oil paint which will add to the vapor resistance of the boards. In any case, the secret of a satisfactory job of board insulation is to have all joints tight. See that manufacturers' instructions are carefully followed in this respect.

Insulation around an existing attic room may offer special problems. In many cases, the obvious method is to have loose fill material blown in from the outside. This requires special equipment, and can be done only by an expert. Usually such a job is expensive, and it is worth making a careful investigation first, to see whether other types of insulation are impossible to use.

The ventilation of air spaces around an insulated attic room may present some difficulty. Yet their ventilation is important, for it is the means for carrying off moisture which is not stopped by the vapor barrier. Unless such moisture is removed, it will condense under the cold roof, and lead to trouble. Normally, if blanket or board insulation is used, the problem takes care of itself, for the material permits air infiltration from one part of the air space to the other. But if insulating material is blown in through the rafters so that it fills all the spaces, be sure to require that the contractor who does the job makes the necessary provision for the roof ventilation.

If your roof does not conform exactly to the shape shown in figure 2, you won't be able to follow the exact method of insulation indicated there. But some variation will be found that will have the same effect. (See figure 3 for example.) You should have no difficulty if you follow the general rule that insulation must be applied between the used space and the roof, as close as possible to the space in use, and surrounding it on all sides which are exposed to the cold. You may need expert advice on complicated gable-windows and other odd forms.

WALL INSULATION

Insulation of the outside walls of the house can save something like 15% in fuel, according to experiments carried out at the Engineering Experiment Station of the University of Illinois. Actually, it may be considerably more or less than this, depending on the condition and material of the walls, and the extremes of prevailing temperature.

In any case, the insulation of the walls of an existing house is a complicated and costly job, and should not be attempted except by an expert equipped with the necessary apparatus.

Whether or not you decide to have the walls insulated will probably be the result of a complicated calculation in which the high cost of insulation weighs on one side, against the savings in fuel costs, the conservation of fuel, the increase in the intangible "comfort" that warm walls will afford, and the additional fact that insulation in the walls tends to discourage rodents.

If wall insulation still seems to be a good idea, the next thing is to find someone who can do the job. Probably the best way, if you don't know a reputable contractor, is to write to

Insulating Materials

Insulating materials of the same type, regardless of brand, show little difference in insulating value. The following facts may, however, help you to make a choice among them:

The most commonly used of all the wall and roof insulators is a group of materials generically termed "mineral wool." All the insulators in this group consist of fine, interlaced mineral fibers, having the general appearance of loose wool or cotton. Among these is "rock wool," which is made from natural rock; "slag wool," made from blast furnace slag; "glass wool," made from silica sand and limestone, with or without the addition of scrap glass and other materials; "vermiculite," made of mica; and "diatomite," made of porous rock and earths.

In addition to the mineral wools, there are several similar substances made of organic materials. Wood fiber, processed for fire resistance, is sold as "kismul" or "balsam wool"; "Cabot's Quilt" is made of eel grass between sheets of kraft paper.

Such materials are sold loose, as well as in the form of blankets or batts. Which one you select should depend on availability, cost, and the possibility of getting competent installation.

Government Regulation

Some time back, the WPB set a ceiling of $200 as the maximum which might be spent on construction and repair work in a residential house. This limitation has been withdrawn with respect to insulation and other fuel conservation measures. There is at present no limit on the amount which may be spent on such work without the need for special priorities. Further, for those who have not the money available to do the job, the FHA will secure loans to cover the cost of installation.

some manufacturers of insulation, asking them to recommend several in the neighborhood. (Some of the outstanding manufacturers of mineral wool insulation are: Johns-Manville, 22 East 40th Street, NYC; National Gypsum, Burley Bldg., Akron, N.Y.; Celotex, 120 South La Salle Street, Chicago; Rubberoid, 502 Fifth Avenue, NYC; and Flintkote, 4111, R.C.A. Building, NYC.) Then ask for estimates of cost from several of the recommended contractors.

The only satisfactory insulation for walls in existing houses is blown-in mineral or organic wool. Even with this, the complaint is sometimes made that the material tends to settle down in the hollow stud space, leaving an uninsulated air-space at the top of the wall. The U. S. Bureau of Mines, after studying cases in which such "settling" was actually found, concluded that the fault was with the method of insertion of the insulation, and that when mineral wool is properly applied, it does not settle.

Another complaint against mineral wool is that it may collect moisture within the wall space, thus increasing the tendency for the material to pack down. Further, such moisture condensation causes "rotting" of the walls, and spoils both inside and outside paint.

Such complaints are relatively rare and no accurate studies are yet available on them. The Bureau of Mines reports that where moisture does collect in the wall space, it is due either to improper insulation, or to excessive humidities within the house. The fact is that unless your house is chronically and noticeably damp—as shown by paint and plaster deterioration both inside and outside—you should have no trouble in this connection. If you do have a damp house, consult an architect or engineer expert in these problems before you have insulation installed.

Some walls, on houses made of brick, stone or cement, have no space between the outer wall and the walls of the rooms for insertion of insulating materials. This is particularly true of old brick houses, where the inside plaster is applied directly to the masonry.

Contrary to popular opinion, masonry walls, even though they may be thick, are poor insulators in the Winter time. The only way in which the insulation can be improved is by addition of insulating material either inside or outside the walls. Both are costly, but usually inside insulation is the more practical. This can be applied by nailing two-inch "furring" strips over the inside wall finish. Blanket insulation can then be applied between these strips, and a vapor barrier placed over the insulation. Then a new interior finish must be added—plaster, composition board, or some other material.

A less expensive, though somewhat less satisfactory job, can be done by using finished insulation boards only on the furring strips. But a vapor barrier on the room side is desirable in any case.

ENCLOSED PORCHES & ADDITIONS

If a porch has been enclosed, or if there is some other addition to the house, its ceilings and walls may have to be insulated as described in the previous sections (see figure 4). If the section beneath the extra room is not finished, further insulation on the floor may be necessary.

Before doing any elaborate floor, wall and roof insulation on a porch, consider the possibility of leaving this space unheated and unused for the Winter. Also, remember that a large share of the total fuel economy on this portion of the house can be made by sealing off all the cracks where cold air can come in.

If the section underneath the floor is accessible, as in a raised porch, blanket-type insulating materials can be placed between or across the under side of the floor beams. Or stiff insulation boards, at least one inch thick, and treated for outdoor use, can be applied at the same place. If such boards are used, it is a good idea to combine them with some insulation between the floor beams, or at least with a layer of air-resistant building paper, tacked on before the insulation boards are applied.

DRESS SHIELDS

. . . help to conserve dresses and save dry cleaning bills. CU technicians offer comments on the types of shields available, their construction, price and protective qualities

Perspiration stains at the armpits have brought many otherwise good dresses to an untimely end. And many more dresses need frequent and otherwise unnecessary dry cleaning because of underarm perspiration. Now, when both dresses and dry cleaning materials are relatively scarce, it has become a matter of both national and personal necessity to conserve both.

One way to do this was discussed last month (see the *Reports,* May 1943) in an article on deodorants and anti-perspirants. Another way is through the use of dress shields.

Dress shields used to be made of rubber-lined fabric. Today, with rubber on the critical list, other waterproof fabrics are being used instead. And so satisfactory are these new plastic water repellents they may permanently replace rubber for this use.

Rubber in dress shields had a tendency to harden and crumble after it had been in use for some time. But the new plastics, though they are as flexible and as waterproof as rubber, do not have this disadvantage. They can go through an indefinite number of washings without sacrifice of any of their desirable properties; many of them can be boiled.

TYPES OF DRESS SHIELDS

Dress shields are sold in a variety of styles and constructions. Most popular are those made simply of

two half-moon-shaped sections, shaped to fit the underarm portion of the sleeve. Some are made to be fastened to the dress by small, attached safety pins; others provide tabs for sewing the shield into dresses. The pin-in type is generally considered more practical, since the shields are readily removed and reinserted after laundering.

Another type makes use of two straps to hold it in place. One strap fits over the shoulder, and the second (usually elasticized), slips over the arm. With this type, only a single pin, fastening the shield to the side seam of the dress, is needed. In addition to these, there are combinations of shields with brassieres or with net vests.

A special design, made for short-sleeved dresses, has the two halves of unequal length. The shorter portion fits into the sleeve of the dress, with the longer part worn next to the body. This has the advantage of giving a maximum of protection, while remaining invisible under short-sleeved dresses.

CONSTRUCTION & SIZE

In construction, too, dress shields differ. They may be made of a single layer of impregnated fabric, or of two or three layers. When more than one layer is used, generally only one of the layers is waterproofed. There are different prices within the various construction groups. For 10¢, you can expect to get single-thickness shields, pinked around the edges; for 35¢ and up, the shields are made in three layers, sewn together—top and bottom of plain material, with a waterproof layer between them.

Most brands of dress shields are sold in three sizes: small, medium and large. The size you need will depend on the size of dress you wear, and on the degree of protection you need. The shield should be large enough to cover all the underarm area which perspires, while fitting comfortably into the dress. The test of a well-fitted dress shield is that the wearer should be unaware of its presence, so far as comfort is concerned, while getting a maximum of protection.

Which type and price range you should get is a matter of individual preference. But it would be wise first to investigate the less expensive models. They are just as satisfactory as the more expensive ones in fulfilling their basic function. And a pair of cheap shields for each dress is likely to be much more convenient than a single pair, pinned into each dress as you put it on.

Dress shields are subjected to concentrated localized perspiration, and should be washed as soon as the dress in which they are worn is taken off. If this is done, mild soap and water are all that is necessary to do a thorough job.

CU technicians examined 38 dress shields of various types, with prices ranging from 10¢ to 54¢ a pair. Since shields are seldom used until they are worn out, best values are to be found in the lower price lines with pin-in or tie-in types, even though better construction is to be found in higher prices. In general, it was found that prices depended on construction, but that those priced above 35¢ a pair offered no special advantages in either construction or design over the 35¢ ones. All those examined were satisfactory in resisting perspiration both before and after laundering.

GASOLINE "DOPES"

. . . will not stretch your gas ration, or perform other advertised miracles. Here are the facts of the case

"Dope," it would seem, is much more applicable to the persons who continue to buy gasoline "mileage extenders" than to the products themselves. For the sad fact is that none of the generally sold "dopes" will stretch your gas ration. That is the conclusion of the National Bureau of Standards, which tested 150 brands of gasoline dopes sold throughout the country.

The following paragraphs are taken from a report by the Bureau, and should prove interesting to motorists who have been tempted to put a "little green pill" into the gas tank, on the theory that it could do no harm and might actually do good:

THE BUREAU'S REPORT

"As a result of the normal failure to reach perfection, the motor vehicle offers a new field for the former dopesters of human ills. In fact, the psychological factors which have played such a large part in the distribution of drugs and medicines are equally potent in their effect on the marketing of fuel dopes. . . .

"In order to analyze the possibilities of improvement in motor gasoline by the addition of dopes, by which term we refer to those substances which are to be added in small amounts such as an ounce or so to the gallon, it will be well to state the requirements of a motor fuel for satisfactory use, and to consider what are the chances of improving its character by means of dopes as above defined. These requirements are somewhat as follows:

"STARTING PROPERTIES. . . . To start an engine enough of the fuel must be vaporized at the existing temperature to form an explosive mixture. . . .

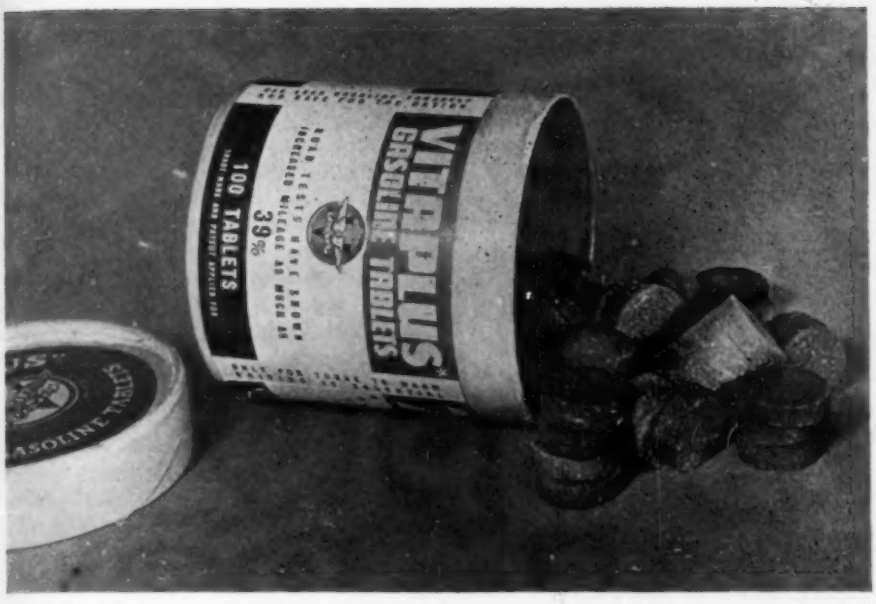
"Obviously, the starting characteristics of a fuel cannot be revolutionized by the addition of any foreign material in amounts much less than one per cent. Claims that any dope promotes easy starting are therefore open to very serious question. . . .

"SUFFICIENT VAPORIZATION. A good gasoline must vaporize in the manifold sufficiently to avoid too much crankcase dilution and to give good distribution of the fuel to the different cylinders. . . .

"The completeness of evaporation, like the ability to start, is controlled by the general volatility of the gasoline. . . . Obviously, this point cannot be appreciably affected by the addition of any material in the small amounts here considered, except on the very improbable assumption that the basic chemical nature of the hydrocarbon [gasoline] is radically changed by the added material. The probability of any such effect is remote indeed.

"VAPOR PRESSURE NOT TOO HIGH. A gasoline must not have too high initial vapor pressure. . . . Otherwise it may form vapor in the supply lines and carburetor, resulting in 'vapor lock,' or stoppage of the engine due to interference with the normal fuel feed. . . .

"So far as the writer is informed, no dope has ever been proposed to remedy this fault.



VITAPLUS *is typical of the many gasoline "dopes" on the market. Its label claims that Vitaplus will increase mileage as much as 39%. Tests of 150 such products by the National Bureau of Standards indicate that such claims are without foundation.*

PEPGO

. . . and other battery "dopes" won't eliminate battery-charging

Under normal operating conditions, the problem of keeping car batteries fully charged more or less takes care of itself. But as gasoline rations dwindle, auto trips become shorter and cars are left idle for longer periods. And sooner or later, many motorists are likely to hear nothing but a feeble gasp when they step on their starters.

The result is the sale of battery "dopes" to cure all battery troubles. There are many of them, sold under a variety of brand names. Latest to come under CU's observation is a product called *Pepgo,* selling for $1.35 (list price, $1.50). Say the *Pepgo* ads:

"Stops sulphation and overheating
"Eliminates battery charging
"Battery will not go dead. . . ."

VALUE OF BATTERY "DOPES"

The worth of products of this type is summed up in a letter written by Mr. Lyman J. Briggs, Director of the National Bureau of Standards to Mr. E. T. Foote, Chairman of the Business Practices Complaints Committee of the Association of American Battery Manufacturers:

". . . Whatever effect these materials may have in a storage battery when added to the standard electrolyte for such batteries, this Bureau has never found any evidence that they affect the fundamental electrochemical reactions which occur in the battery when it is charged or discharged. . . .

". . . Advertising leaflets accompanying these compounds are usually careful to specify that the battery and the charging system on the car must be in mechanically good condition before using the material. If this were not so, the shortcomings of the panacea would speedily become apparent. . . .

". . . The ordinary user, of course, cannot compare the efficiencies of similar batteries treated with the material and others not so treated, nor can he determine whether the material extends the useful life of his battery. Carefully controlled tests are necessary in order to determine these points definitely and *none of these materials which have been tested here have produced any beneficial effect*

"KNOCKING CHARACTERISTICS. The tendency of gasolines to knock . . . has been under much discussion in relation to the action of fuel improvers. Unlike the other properties of fuels mentioned above, this characteristic . . . is in some cases greatly modified by the presence of small amounts of inhibitors. . . .

"Routine tests have been run on about one hundred fifty of such dopes by the Bureau of Standards at the request of various submitters, and without exception the reports have shown no definitely measurable effect on detonation. These tests, of course, did not include tetraethyl lead or other of the recognized knock suppressors since . . . these are not available for distribution as dopes.

"POWER DEVELOPMENT. The maximum power of a motor-vehicle engine is determined mainly by the size and design . . . [There follows here a discussion, in engineering terms, showing that with a given engine, and with the commercial gasolines now in use, power is practically unaffected by type of fuel.] . . . it is obvious that neither fuel dopes nor different fuels which do not affect detonation [knocking] can greatly affect . . . the ability of a car. . . .

"CARBON DEPOSITS. The collection of so-called carbon in engine cylinders is a nuisance and expense, as it may be necessary to remove it to avoid excessive detonation and other troubles. Claims for the removal or prevention of carbon deposits commonly have been made for fuel dopes. . . .

"Although there are various recognized solvents which will dissolve the binder in the normal carbon deposit . . . it does not appear that the mixing of these in relatively small quantities with the fuel should be an effective method for their use. There is no valid evidence of the effectiveness of any fuel dopes as herein defined in the removal or prevention of carbon deposits. . .

"SATISFACTORY MILEAGE. Another requirement of a motor fuel is that it shall give a satisfactory number of ton-miles of transportation per gallon used. Increased economy is very often claimed for gasoline dopes. . . .

". . . here is a fruitful field for improvement. Any device that will induce or compel the user to run on a leaner mixture often will have the obvious advantages of reducing the fuel consumption, reducing the carbon deposit and thus the tendency to knock, and improving the general performance of the vehicle at the expense perhaps of some little delay in warming up the engine in cold weather.

"Fuel dopes are frequently accompanied by instructions to use a leaner mixture. When such instructions have been followed, they have sometimes seemed to accomplish favorable results. . . . It is safe to say, however, that an adjustment of the carburetor would have accomplished the same or better results. . . ."

when added to the regular electrolyte. Some are definitely harmful. . . ."

The basic claim for these "special" electrolytes is that they dissolve hardened lead sulphate which has formed on battery plates, and by so doing make possible increased life or eliminate the need for supplementary recharging. For the most part these "special" electrolytes consist of epsom salts, Glauber's salt or some similar substance. Actually none of them affects the solubility of lead sulphate. Nor do they produce electric current chemically.

Sulphation (formation of lead sulphate on plates) can be retarded only by keeping the battery fully charged. And when your car is used only occasionally, it will have to be charged at a service station (or at home, if you have the necessary equipment).

While this may be a nuisance, it is the only way to keep batteries in operating condition—no "dope" will do the trick.

JARS FOR HOME CANNING

Many types of jars can be used for home canning. CU advises you how to check jars you have on hand; discusses types of jars and closures available in the stores

Four to five billion jars of fruits, vegetables, meat and poultry—twice as many as in a peacetime year—will be canned at home this season, according to U. S. Dep't of Agriculture estimates. While a large quota of jars is being produced to meet this need, supplies will be inadequate unless housewives make use of other available materials.

One large source is the old but sound jars manufactured in previous years. Remember that a canning jar is normally good for many years' use. Salvage all the canning jars you can before you go out to buy new ones.

RE-USE FOOD JARS

In addition to old stores of canning jars, many jars in which mayonnaise, coffee, pickles and other food products were packed are re-usable for home canning. In fact, one and a half billion such jars have been manufactured since last Summer. Make a point of saving such jars, together with their original metal lids, for use in home canning.

Not all commercial food jars are suitable for this purpose. Some do not have lips and caps which can be resealed once they are opened. But these, too, may be used for jellies, preserves or other products that need only a paraffin seal.

When you've sorted out all the jars that you think can be re-used, get to work on the lids. Look them over carefully, making sure that the caps are not bent at the edges or chipped. Discard any that have defects serious enough to permit air infiltration when placed on jars.

Now try fitting the lids to the jars. If yours is the typical household, you'll find you have more jars than caps to fit them; more than likely the jars you have left over will be of different types. A good procedure on all screw-top jars is to use a standard Mason-type screw cap as a test piece. Try it on the jars needing caps. If it fits, you can use one of several standard caps described below.

TYPES OF CAPS

If the ordinary Mason screw cap doesn't fit, your jar may have a narrow opening (like the "63" size opening of vacuum-packed coffee jars), a shallow thread, or lugs instead of screw-type closure. In that case, you can use only the jar's original cap, or one just like it. If you haven't the original caps, try writing to the manufacturer of the product sold in the jars; they may be able to supply you with additional caps, or tell you where to get them.

Only after you have exhausted all possible sources of re-usable jars, and find you still haven't enough to carry you through your canning schedule, should you shop for new ones.

Several types of jars and closures are to be found in the stores. Which kind you buy will depend on availability, price and preference. Actually no one type has any great advantage over the others.

For the standard screw-top Mason jar, three types of closure are available. The familiar porcelain-lined zinc top is a war casualty, because of military needs for zinc. In its place is a metal cap with white lacquer lining, which is used with a shoulder rubber ring, just as was the zinc cap (see figure 1A). Provided the cap does not become bent out of shape it can be re-used.

The three-piece cap, consisting of a metal screw band, a glass disc, and a rubber seal over the top (not the lip) of the jar is preferred by some canners (see figure 1B). In use, the rubber and disc are placed over the opening of the jar, and the cap screwed on. Then, after the processed jar has been cooled, the band is unscrewed, and can be used on other jars. The glass discs, too, can be used for more jars next season.

Similar in principle to the three-piece cap is one made in two pieces for jars of the same type (see figure 1C). The band is similar to that used

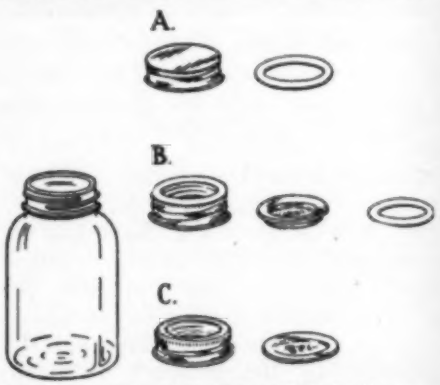


FIG. 1: STANDARD SCREW-TOP *Mason Jar. Use (a) metal cap and shoulder rubber ring; or (b) a three-piece cap: metal screw band, glass disc and rubber seal over the top; or (c) metal screw band and flat metal disc with adhering rubber or composition rim.*

FIG. 2: JAR WITHOUT SHOULDER. *If the neck is shallow, use the cap that came with the jar or one like it and get new metal discs; if the neck is deep, two- or three-piece caps described in figure 1 can be used.*

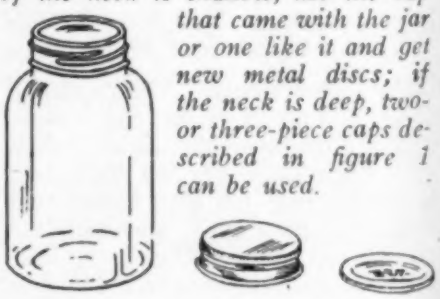


FIG. 3: "IDEAL"-*type jar with wire spring clip, and a glass lid with rubber ring.*

Hearing Aids—A Correction

In the March 1943 issue of the *Reports,* it was incorrectly stated, in the article on "Hearing Aids," that "B" batteries should be alternated after several hours' use, whereas "A" batteries, which last for several hundred hours, need not be alternated. Actually, the reverse is true; "A" batteries should be alternated, but "B" batteries need not be.

for the three-piece cap, but not quite so deep. And instead of the glass disc with separate rubber, there is a flat metal disc with an adhering rubber or composition rim. As with the three-piece cap, the band can be unscrewed and removed after processing, and re-used for further canning. But after the jar is opened, the inner disc must be discarded, and cannot be re-used. Replacement discs cost a little over a penny apiece as compared with about a half cent for new rubber rings.

SHALLOW NECK JARS

A second type of jar, having the same size opening as the standard Mason jar, but without a shoulder, has either a deep or shallow neck, for the screw cap. If the neck is deep, either the regular two-piece or three-piece cap can be used. If the neck is shallow, you can use the cap that came with the jar, replacing only the inner disc; or you can get new caps as well as discs. The metal discs used for this type of jar are the same as those used for the two-piece metal caps described above, but instead of the band-type screw top, a regular screw top is used. It is applied in the same way as the two-piece closure described above, and new discs must be used each time; they cannot be re-used (see figure 2).

A similar two-piece closure is also available in the "63" size, for narrower-mouth bottles; separate discs may also be bought if you already have the screw-type tops.

Another type of jar, with a wire spring clip attached to the jar—the familiar "Ideal" type—requires a glass lid and a rubber ring (see figure 3). The glass needs to be replaced only when it is accidentally broken or chipped; normally only the rubber rings need replacement each year.

Some Notes For Successful Canning

• Most of the rubber rings available this year are made of reclaimed rubber. This is less elastic than old-time rings used to be: don't test them by stretching. And it is even less safe than before to re-use these rubber rings.

• For success in canning, it is essential to adjust each type of jar cap correctly before processing. If you use a three-piece cap, screw the band on tight, then turn it back about one-quarter inch, loosening it slightly. Do the same with a one-piece cap having a shoulder-rubber ring. But if you are using a two-piece cap, screw it down tightly before processing.

• Screw bands should be removed carefully after the processed jars have been allowed to cool over night. However, if the band doesn't come off easily, don't force it—otherwise you might break the seal. In that case, leave the band on until you are ready to use the jar of food.

• Cool jars upright after processing. It isn't necessary to turn them upside down to assure a good seal.

• Before re-using the metal cap from a jar that contained commercially canned products (like mayonnaise or coffee), clean out all the old paper lining or sealing compound. The paper liner can usually be pried out with a knife or ice-pick; to remove sealing compound, boil the cap, then scrape.

• When canning fruit, see that all the pieces are covered with juice or syrup during processing; otherwise they may become darkened on the exposed surfaces. Pre-cooking before processing also reduces the possibility of discoloration.

• Vegetables may become discolored during processing, but this does not mean that they are spoiled. Cream-style corn in jars sometimes turns dark because the high temperature needed for processing tends to caramelize the sugar. Beets may become dark from contact with the iron in cooking utensils, or over-cooking may cause them to turn dark.

• If you live in a hard-water area, don't use free-running salt in canning vegetables. The chemicals used to make the salt free-running may react with the water, and turn it cloudy.

• Cold-packing is not advisable for vegetables or meats because of the increased likelihood of spoilage. Cold-packing may be used for fruits, but hot-pack is preferable because more can be packed into each jar.

• Although recipe books say that fruit jars may be processed in the oven, the Dep't of Agriculture advises the open-kettle method as being less likely to result in spoilage.

• The Dep't of Agriculture advises against canning non-acid foods such as vegetables and meats without a pressure cooker, since certain organisms and spores—including that of the deadly *bacillus botulinum*—are not destroyed at boiling temperatures. But if you do can such products without using a pressure cooker, be sure to boil them for at least ten minutes before even tasting the food. *This is important,* for these organisms and the toxins they produce may be present even though the food does not appear to be spoiled. Boiling just before use makes them safe.

• Most cases of poisoning from the *bacillus botulinum* have been reported on the Pacific Coast, or in the Mountain and Great Plains States. Outside these regions, some State agricultural colleges approve canning any meats and vegetables without the use of a pressure cooker. Write to your State Agriculture Experiment Station for approved canning methods in your locality.

FOR THE PEOPLE

A digest of government actions in the consumer interest

Teel

Advertising for the dentifrice *Teel* is "properly within the description of trade puffing which is not unfair or deceptive in connection with normal competition," according to a statement made by Procter & Gamble, *Teel's* manufacturers, in answer to an FTC complaint. In fact, according to P&G, *Teel's* ads have performed a valuable public service in pointing out to the American public the effect of using tooth pastes and tooth powders which are too abrasive.

These replies were occasioned by FTC's complaint that advertisements for *Teel* are not only false and misleading, but they unfairly disparage competing products through representations that "*Teel* is a revolutionary discovery in dental science, cleans teeth utterly, and is a complete and satisfactory substitute for the popular brands of tooth pastes and powders; that most of such pastes and powders contain abrasives and cut cavities in the soft portions of the tooth structure exposed by receding gums; and that a large portion of the public are constantly exposing their teeth to serious damage through the use of tooth pastes and powders."

As a matter of fact, there are some half-truths in the *Teel* ads. True, *Teel* contains no abrasives. True, too, that some popular dentifrices do (ten of 68 toothpastes and four of the 45 tooth powders listed in the September 1942 *Reports* were rated "Not Acceptable" because laboratory tests showed them to be excessively abrasive).

But as for *Teel* doing a good job of cleansing, its own ad is a dead give-away: "Brush your teeth every day—thoroughly with *Teel*. . . . Once a week brush teeth with plain baking soda on brush moistened with *Teel*. Brush at least an extra minute."

The American Dental Ass'n, in refusing to place *Teel* on its "Accepted" list, had this to say: "Just what the 'amazing benefits' [of *Teel*] might be is not entirely clear. Nor is it clear why salt and soda should not be used exclusively in preference to *Teel*. . . . these simple ingredients aid in cleansing the teeth when *Teel* does not. . . ."

FTC will hold hearings in due course.

Victory for F&DA

Whether or not the Food and Drug Administration has the power to enforce the standards it sets was the real question brought before the Supreme Court when it was asked to make the final decision in the case of the Quaker Oats Co. *vs.* F&DA. And the decision, when it came through, was a complete victory for F&DA.

In its narrower sense, the case brought before the Court was simply this:

According to F&DA standards, no product which is sold as plain "farina" can have added to it any vitamins or minerals not present in the natural product. But if a product is to be called "enriched farina," it must be supplemented with a specified quantity of vitamin B_1, niacin and iron. In addition "enriched farina" may have added vitamin D and calcium.

But for the past ten years—long before F&DA's standards were laid down—the Quaker Oats Co. has been selling a product as "enriched farina," and containing no added vitamin B_1, niacin or iron—only vitamin D. And, the company declared, it would be perfectly satisfied to go on making its farina this way; it didn't want to add the supplements called for in the standards.

Not satisfied with F&DA's decision that farina so made was in violation of the law, and its sale either as plain farina or enriched farina illegal, Quaker Oats took the case to the Circuit Court.

In a decision so broad that it threatened to sweep aside F&DA's whole standardization program, the Circuit Court sided with Quaker.

But F&DA promptly appealed the decision to the Supreme Court. Food standards, contended F&DA, would be meaningless unless manufacturers were forced to comply with the standards set by the government.

The Supreme Court's decision cleared up F&DA's status once and for all. The judiciary, said the Supreme Court, has no right to substitute its judgment for that of an administrative agency in regard to the factual basis for a government regulation. And it was just this which the Circuit Court did in upholding the Quaker Co.

So the final decision went to F&DA. And its standards have to be met by manufacturers.

Willys-Overland "Jeeps"

Not that many people are in a position to buy a Willys-Overland *Americar*—or any other car—these days. But FTC's slap at the manufacturer's advertising is an interesting foretaste of things to come.

The company, it seems, has been capitalizing on the story that they "created and perfected the . . . 'Jeep' . . . and that their regular passenger motor cars embody the same qualities of durability and economy as the 'Jeep'."

Here are some typical quotations from its ads:

"Climbing stiff grades, crashing streams, mud and sand—hauling men, guns and other vital materials—the Jeeps are getting more power, more speed, more action and durability out of a ton of steel and a gallon of gasoline, than has ever been done before. It was the great Willys civilian engineering staff fresh from their triumphs in the *Willys-Americar* and *Go-Devil* engine, who collaborated with the Quartermaster Corps of the U. S. Army to create and perfect the jubilant Jeep. . . .

". . . in civilian service, the new 1942 *Willys-Americar*, 'the Jeep in Civvies' is equally outstanding. Designed by the same engineers, built by the same trained hands, powered by the same fuel-saving *Go-Devil* engine as the rugged 'Jeeps,' it provides dependable transportation at the lowest cost of any full-family size car in the world. . . ."

According to FTC's complaint, Willys-Overland had nothing to do with designing or creating the Jeep, nor was it the designer or sole manufacturer. Furthermore, the FTC complaint continues, "the regular passenger cars of Willys-Overland do not embody the same qualities of durability and economy as are embodied in the 'Jeep'."

These ads have a "tendency to deceive and mislead the purchasing public," says FTC. And the company will be called upon either to prove that FTC is wrong or to stop the Jeep claims.

HEALTH AND MEDICINE

HAROLD AARON, M. D., SPECIAL MEDICAL ADVISER

MEDICAL CONSULTANTS: **Dr. Anton J. Carlson**—Chairman, Dep't of Physiology, University of Chicago; Past President, American Physiological Society; **Dr. Theodor Rosebury**—Assistant Professor of Bacteriology, College of Physicians & Surgeons, and School of Dental and Oral Surgery, Columbia University; **Dr. Marion B. Sulzburger**—Ass't Professor of Clinical Dermatology and Syphilology, New York Post-Graduate Medical School, Columbia University; Editor, Journal of Investigative Dermatology.

CU's Medical Consultants give technical advice on matters of medicine which lie within their fields. CU is responsible for all opinions concerning social, economic and public health questions.

TO LOSE WEIGHT SAFELY

. . . you must follow a carefully planned diet. CU's medical adviser tells you how, with sample menus and tables showing caloric values of various foods

Since the cause of overweight is the eating of more food than the body requires (see the *Reports*, May 1943) the only effective cure for it is to reduce food intake. There is no other way, and there are no short cuts.

Exercise alone, it has been found, is of very little value; in some cases of obesity, it may even be harmful. A person who undertakes to limit his diet drastically (less than 600 calories per day) and who, at the same time, indulges in strenuous exercising or sports, may end up with a serious case of acidosis (an abnormal reduction of the alkalinity of the blood and of the reserve alkali of the body tissues). Furthermore, exercise usually promotes a ravenous appetite, so that it becomes harder than ever to adhere to a low-calorie diet. It is for this reason that so many new soldiers gain weight despite many hours of physical activity each day.

"Slenderizing" massages with mechanical machines may be pleasant and fashionable, but they are usually expensive and they do not cause loss of weight. *It has never been proved that fatty tissue can be rubbed away from any part of the body.*

"DIETETIC" FOODS

Nor can the use of "dietetic" foods replace dieting. Many such products, such as *Thomas' Protein Bread*, lay stress on protein content. But all proteins yield calories just as do starches, and one can become overweight on an exclusive protein diet as well as on a mixed diet, if more than the body requires is eaten.

Claims that drinking grape juice, because of some special property, will reduce weight have no foundation. The fact is that grape juice is a food; any food eaten before a meal tends to depress the appetite and reduce the amount of food eaten as part of the meal. But the total intake will not necessarily be less. The fact that the juice contains dextrose or maltose or any other "natural" sugar is entirely irrelevant. "Natural" sugars are just as fattening as refined sugars.

SHOULD YOU REDUCE QUICKLY?

Whether to reduce gradually or rapidly has been the subject of considerable dispute. There is no hard and fast rule. Much depends upon the temperament of the person. If quick results are necessary for health or morale, a safe and rapid reduction course is possible. The best results in such cases will be obtained if the patient submits to medical supervision in a hospital or sanatorium.

A more gradual reduction in weight has several advantages. It can be carried on at home, comfortably and without upsetting work or recre-

Fat Content per 100 Grams of Various Foods[1]

0.1 to 2%

- **FISH**
  - Bass
  - Carp
  - Cod
  - Croaker
  - Finnan haddie, smoked
  - Flounder, southern
  - Haddock
  - Whiting
  - Perch
  - Pickerel
  - Pike
  - Porgy
  - Red snapper
  - Smelt
  - Sole
  - Sturgeon
- **SHELLFISH**
  - Clam
  - Crab
  - Crayfish
  - Frog legs
  - Lobster
  - Mussels
  - Oysters
  - Scallops
  - Shrimp
- **MISCELLANEOUS**
  - Cottage cheese
  - Tripe

2 to 5%

- **FISH**
  - Bluefish
  - Halibut steak
  - Mackerel, horse
- **CHICKEN**
  - Light meat
  - Dark meat
  - Gizzard
  - Liver
- **DUCK**, Wild
  - Muscle
  - Gizzard
- **TURKEY**
  - Light meat
  - Liver
- **RABBIT**, Wild
  - Muscle
- **VEAL**
  - Kidney
  - Liver
  - Sweetbread
  - Tongue
- **LAMB**
  - Liver
  - Kidney
- **BEEF**, Liver
- **PORK**
  - Kidney
  - Liver

5 to 10%

- **FISH**
  - Butterfish
  - Eel
  - Herring, Atlantic
  - Lake trout
  - Salmon, canned
  - Shad
- **DUCK**, Domestic
  - Muscle
- **TURKEY**
  - Dark meat
- **RABBIT**, Domestic
  - Muscle
- **VEAL**
  - Loin
  - Rib, lean
  - Round, lean
  - Rump, lean
- **LAMB**
  - Leg, lean
- **BEEF**
  - Brains
  - Chuck, lean
  - Corned beef, very lean
  - Dried beef
  - Foreshank
  - Hindshank
  - Kidney
  - Round, lean
- **VENISON**, Lean
- **GOOSE**, Muscle
- **GUINEA HEN**
- **QUAIL**

10 to 15%

- **FISH**
  - Halibut, smoked
  - Herring, canned
  - Mackerel, Atlantic
  - Mackerel, Spanish
  - Salmon, Atlantic
- **LAMB**
  - Chops
  - Shoulder, lean
- **BEEF**
  - Neck, very lean
  - Rib, very lean
  - Roast, lean
  - Sirloin
  - Tenderloin
  - Tongue, lean
- **VENISON**
  - Side and hind quarter

[1] As adapted by Dr. L. H. Newburgh from C. Chatfield and G. Adams, "Proximate Composition of American Food Materials," Circular 549, U. S. Dep't of Agriculture, June, 1940. Articles very high in fat have been omitted.

Eight Hundred Calory Reduction Diet[1]

Note: There are approximately 30 grams in an ounce.

	HOUSEHOLD MEASURE	WEIGHT GM.
MENU PLAN		
BREAKFAST		
28-calorie fruit	1 serving	100
Egg	1	50
Bread	1 slice	30
Butter	1 teaspoon	5
LUNCHEON		
Meat or fish	2 oz.	60
16-calorie vegetable	1 serving	100
28-calorie fruit or vegetable	1 serving	100
Skimmed milk	1 glass	200
Butter	1 teaspoon	5
DINNER		
Meat or fish	3 oz.	90
16-calorie vegetables (1 raw, 1 cooked)	2 servings	200
40-calorie fruit or vegetable	1 serving	100
Skimmed milk	1 glass	200
Butter	1 teaspoon	5
SAMPLE MENU		
BREAKFAST		
Strawberries	½ cup	90
Poached egg	1	50
Whole wheat toast	1 slice	30
Butter	1 teaspoon	5
Black coffee	as much as desired	
LUNCHEON		
Crab meat salad		
Diced celery	¼ cup	60
Crab meat	½ cup	120
Minced onion and lemon		
Lettuce leaves		
Mayonnaise[2]	1 tablespoon	15
Melon	1	60
Skimmed milk	1 glass	200
DINNER		
Beef steak, broiled	3 oz.	90
Asparagus	6 stalks	100
with butter	2 teaspoons	10
Lettuce salad		
Lettuce	⅛ head	50
Tomato	1 small	100
Dressing[2]	as much as desired	
Pear	½ cup	120
Skimmed milk	1 glass	200

[1] From "Obesity," by Dr. L. H. Newburgh.
[2] Ingredients: 1 egg, 1 teaspoon salt, 1 teaspoon mustard, 2 cups liquid petrolatum, 2 tablespoons vinegar and ⅛ teaspoon paprika.

ation habits. And the low-calorie diet used establishes improved eating habits.

WHAT FOODS SHOULD BE AVOIDED?

The first requisite in losing weight through diet is the elimination of unessential foods—the sugars and starches. The former must be omitted from all beverages and fruits. Saccharin is a harmless, calorie-free substitute for sweetening beverages. "Soft drinks" contain a high percentage of sugar and should be eliminated from the diet. Starchy foods such as bread, potatoes, rice and corn should also be avoided.

Fats are highest of all foods in calorie value. Since they contribute so much to palatability of foods, however, it is difficult to do without them entirely. But meats, poultry and fish high in fat content should be avoided and fried foods should not be eaten. Salads should be made without oil dressing; lemon juice or vinegar, alone or with spices, can be used instead.

Alcoholic beverages have a high energy value. A glass of beer (eight ounces) yields about 125 calories. A jigger (one ounce) of whiskey, gin or rum yields about 75 calories. A wine-glassful of wine yields from 75 to 90 calories. All should be avoided if you are reducing.

WHAT FOODS ARE PERMITTED

Foods that are permitted in a reducing diet include most of those that go to make up the normal, well-balanced diet. The only difference is in the quantity. The essential foods are: milk, eggs, meat, fish, fowl, cheese, fruits, vegetables and whole wheat breads or cereals.

MILK. Because of the calcium, vitamin B complex and protein content, it is good practice to have a pint of whole or skimmed milk a day in any reducing diet. Skim milk or buttermilk has about half the caloric value of whole milk and should be used in diets furnishing less than 1,000 calories daily. Pouring the cream layer from a bottle of milk will not give a product as low in fat as the dairy skimmed milk.

MEAT, FISH AND FOWL. Lean meats, fish or fowl should be eaten at least once daily while reducing. They "stick to the ribs" and make low-calorie meals more satisfying. Shellfish are considered as being excellent sources of minerals, proteins and B vitamins. They are also lower in calories than meats.

CHEESE. Cottage cheese is the only cheese suitable for use in low-calorie diets. Other varieties contain as high a percentage of fat as a medium fat meat.

EGGS should be boiled or poached, not fried or scrambled. They are excellent as substitutes for meats.

VEGETABLES. Cooked or raw vegetables should be served at least twice daily. For the very stringent reducing diet choose only 16-calorie or 28-calorie vegetables (see table). Because of their vitamin and mineral content, the use of vegetables must be emphasized. Butter fat is rich in vitamin A but green and yellow vegetables are also good sources of vitamin A. Therefore, an abundance of green and yellow vegetables—especially leafy ones—will furnish ade-

Fruits and Vegetables Classified According to Their Average Calorific Values per 100 Grams[1]

16 CALORIES

VEGETABLES

Asparagus
Bamboo shoots
Beans, green
Beans, wax
Bean sprouts
Beet greens
Broccoli
Cabbage
Cabbage, Chinese
Cauliflower
Celery
Chard
Chicory
Cress, water
Cucumbers
Endive
Escarole
French endive
Lettuce
Mustard greens
Radishes
Sauerkraut
Sorrel
Spinach
Squash, Summer
Tomatoes
Tomato juice
Turnip tops

FRUIT

Rhubarb

28 CALORIES

VEGETABLES

Carrots, canned
Collards
Dandelion greens
Eggplant
Kale
Kohlrabi
Leeks
Lamb's quarters
Okra
Parsley
Peppers
Pumpkin
Squash, Winter
Turnips

FRUITS

Blackberries
Melons
Strawberries

40 CALORIES

VEGETABLES

Brussel sprouts
Beets
Carrots, fresh
Onions, fresh
Peas, canned
Rutabagas

FRUITS

Applesauce, canned, unsweetened
Apricots, water-packed
Blueberries
Cranberries
Gooseberries
Grapefruit
Grapefruit juice
Peaches
Pears
Loganberries
Limes
Lemons
Raspberries
Tangerines

52 CALORIES

VEGETABLES

Lima beans, green, canned

FRUITS

Apricots, fresh
Cherries, sour, fresh
Oranges
Orange juice
Pineapple
Plums
Kumquats

64 CALORIES

VEGETABLES

Parsnips
Kidney beans, red, canned
Peas, fresh

FRUITS

Huckleberries
Grapes
Mangos
Nectarines

96 CALORIES

VEGETABLES

Corn, canned, sweet
Potatoes

FRUITS

Prune juice
Figs, fresh
Grape juice
Pomegranates

[1] As adapted by Dr. L. H. Newburgh from C. Chatfield and G. Adams, "Proximate Composition of American Food Materials," Circular 549, U. S. Dep't of Agriculture, June, 1940.

quate vitamin A. Vegetables should not be cooked with butter or other fats.

FRUITS. At least two servings of a raw fruit should be eaten each day. Although most raw fruits are in the 52 to 96-calorie group (see table), they are such good sources of vitamin C and minerals that the relatively high sugar content may be disregarded.

CONTINUED ON PAGE 166

CUMULATIVE INDEX

Each issue of the Reports contains this cumulative index of principal subjects covered since publication of the 1943 Buying Guide issue. By supplementing the Buying Guide index with this one, members can quickly locate current material and keep abreast of changes resulting from new tests. Page numbers run consecutively beginning with the January 1943 issue. Jan. 1-28; Feb. 29-56; Mar. 57-84; Apr. 85-112; May 113-140; June 141-168.

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BREADS AND CEREALS. These are concentrated foods, and should be omitted from reducing diets as much as possible. One slice a day is the most that should be permitted. *Ry-Krisp* and similar products are generally low in calories but high in roughage. Those with sensitive digestive tracts should avoid them. All breakfast cereals, processed or natural, should be eliminated, since they are rich in calories.

FATS. If the caloric allowance permits the use of fats, those with vitamin A, such as butter and fortified oleomargarine, should be preferred to meat fats and vegetable oils.

OTHER FOODS. Since clear tea and coffee, mushrooms, and soup made from bouillon cubes contain practically no calories, they can be used as desired. The amount of water is not limited. Drinking large amounts of water does not, as is popularly supposed, cause retention of excessive amounts in the tissues, and, conversely, restriction of fluids will not prevent retention in the tissues.

The 800-calory diet described in the table will cause a loss of about eight pounds a month in an average case. It should be kept in mind, however, that frequently no weight is lost during the first week or two. Dr. Newburgh[1] has shown that this initial failure to lose is due to retention of water in the tissues. After the second week or so, when the water has been mobilized from the tissue spaces and excreted, weight will be lost rapidly.

No diet containing less than 800 calories a day should be attempted without medical supervision. If the amount of weight to be lost is not great, or if you are satisfied with a more gradual loss, more calories may be taken in daily.

When the need to lose weight is urgent, as in heart disease, hospitalization under expert medical supervision is imperative. When the diet is less than 800 calories daily, it may not be possible to obtain enough of the B-complex vitamins from the diet, and the use of B-complex preparations may be necessary. (B-complex preparations on the market will be analyzed in an early issue of the *Reports.*) Brewers yeast contains approximately 100 calories per ounce; this should be taken into consideration by persons trying to lose weight.

[1] "Obesity," by Dr. L. H. Newburgh in *Archives of Internal Medicine*, December, 1942.

CU's Annual Meeting

The seventh annual meeting of Consumers Union will be held in New York this year on Saturday, June 26. Members are invited to attend, and to bring non-member guests to the afternoon and evening sessions. The morning business session is open to CU members only.

The meeting is to be held in the auditorium of the New School for Social Research, 66 West 12th Street, New York City. The afternoon session, on health problems, will be held jointly with the Physicians' Forum.

The program for the meeting follows:

●

9:30 A. M. ***REGISTRATION: MOTION PICTURE ON FOOD PROBLEMS IN THE U. S.***

10:00 A. M. ***A REPORT TO MEMBERS ON THE WORK OF CONSUMERS UNION.***

Chairman's report on election of Directors: COLSTON WARNE, President.

Preliminary report on the annual questionnaire: MADELINE ROSS, Editor.

Report on CU's work during the past year: ARTHUR KALLET, Director.

Financial report: BERNARD REIS, Treasurer.

CU's stand on advertising: COLSTON WARNE, President.

Status of CU's Report on Contraceptive Materials: PAUL KERN, Secretary.

CU and labor: LYDIA ALTSCHULER, Staff Representative.

2:30 P. M. **(Joint Session of Consumers Union and Physicians' Forum)**

HEALTH PROBLEMS IN WARTIME

"How to Provide Medical Care for the People": DR. MILES ATKINSON, F. R. C. S.; Secretary of the Physicians' Forum; author and lecturer.

"Emotional Problems of Children in Wartime": DR. EMANUEL KLEIN, Psychiatrist, Bureau of Child Guidance, New York City Board of Education; Member, New York Psychoanalytic Institute; author and lecturer.

"Food to Win the War and the Peace": DR. ROBERT S. GOODHART, Chief of the Nutrition in Industry Division, Nutrition and Food Conservation Bureau, U. S. Dep't of Agriculture.

8:00 P. M. ***THE WORK OF OPA***

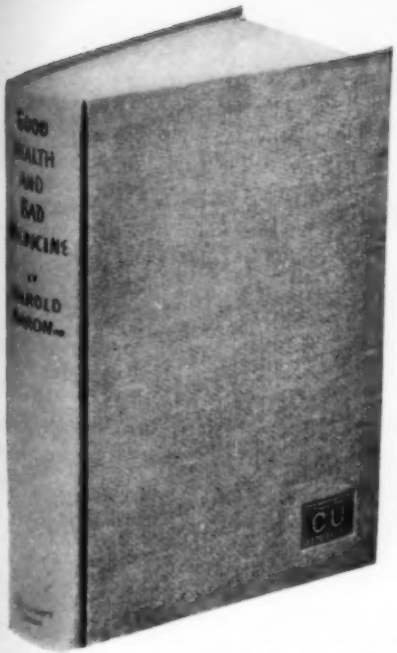
ORMSBEE W. ROBERTSON, Educational Services Officer, Office of Price Administration.

DICKSON RECK, OPA Standards Division.

WHAT'S RIGHT AND WHAT'S WRONG WITH OPA

DR. HARTLEY W. CROSS, Professor of Economics, Springfield College; Vice-President, Consumers Union.

DR. LELAND GORDON, Professor of Economics, Denison University; Member of Board of Directors, Consumers Union.



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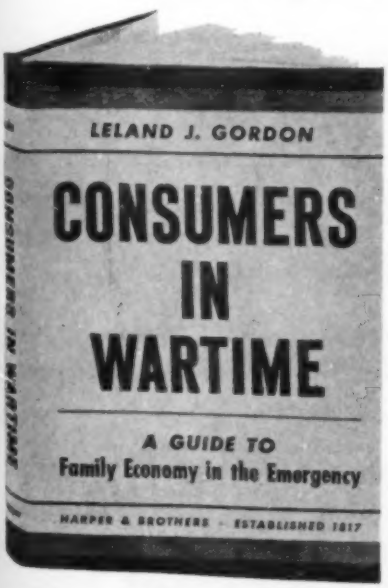

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